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# Community College Instructors' Perceptions of Online Teaching and Learning: A Study of a Rural Community College

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# Community College Instructors' Perceptions of Online Teaching and Learning: A Study of a Rural Community College

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# ABSTRACT

This qualitative study examined online teaching and learning in a rural community college setting from the instructors' points-of-view. The research questions focused upon what the instructors viewed as the benefits and detriments of online teaching and learning, both for them and their students, their views of the effects of online learning on their students, the nature of teaching online in a rural community college, and the interaction between instructors and students, and among students, in online classes. Constructivist learning theory served as the theoretical framework of this study. The findings are based on an analysis of the data collected from two rounds of in-depth interviews with nine participants, observations of the participants' online courses, and the review of related documents.

The key findings related to the rural setting dealt with the lack of sophisticated Internet infrastructure in rural service areas and a lack of student readiness for online instruction. A gap in theory and practice also exists; with one exception, online instruction was not grounded in any theoretical framework. The interaction in online classes varied from class to class, with e-mail correspondence and discussion threads constituting the bulk of the interaction. The lack of face-to-face contact emerged as a troublesome issue, with no instructor believing that that the online course was superior to the traditional, seated course. Several instructors cited practical and learning benefits specific to online courses, and all recognized the need to offer courses online.

The benefits of online teaching and learning included both practical and learning benefits. Flexibility and convenience were cited as key practical benefits, and learning

benefits included additional opportunities to reflect and interact online, to draw from personal experiences, and learn at one's own pace. The acquisition of time-management, reading, writing, research, technological, and problem-solving skills on the parts of the students were also viewed as learning benefits. The negative aspects included feelings of isolation, a lack of academic preparedness to learn online on the part of the students, the problems related to dial-up Internet access in rural areas, and the increased amount of preparation required to teach an online course.

The study discusses patterns in the data as well as contradictions to these patterns. Limitations of the study and recommendations for the community college and for future studies are also addressed.

# CHAPTER I

# INTRODUCTION

## Overview

During the last decade, the Internet emerged as a major force on the world scene. Today, people use the Internet to purchase and to auction goods, to maintain correspondences around the world, to make hotel and airline reservations, to monitor the weather and to check the news—the possibilities are endless. Practically every sector of society has been affected by the Internet, for good or for ill. Education has not been exempt from the technology onslaught, and online instruction and learning are rapidly becoming major forces on the college scene.

Because online learning and instruction are still in their infancies, the long-term implications of their impact have yet to be realized. Still, the fact is that community colleges across the nation are embracing online learning and instruction; whether or not this newest technological advance in the evolution of education will prove to be of benefit to the non-traditional adult learners served by community colleges remains to be determined.

## Rationale for the Study

The lack of theory concerning online teaching and learning, the gap in the literature concerning the impact of online learning on adult learners, specifically on the non-traditional adult learners who constitute the bulk of the community college population, as well as the dearth of literature focused on online learning in rural

community colleges warrant a study of rural community college instructors' perceptions of online teaching and learning.

Online learning is a relatively new phenomenon; the instructional technology revolution is in full swing, and the number of students opting to participate in this mode of learning is rapidly increasing. According to a College.com study (2000) of online learning, by 2002, analysts expected 2.2 million students to be enrolled in online courses (cdlponline.org, 2000). Kearsley (2000) adds that it is difficult to estimate exactly what percentage of courses in higher education are offered online because online classes involve varied formats, but he notes that there is a "clear trend for more and more courses to be offered completely in online form, with no on campus component" (p.17-18). One need only visit any university or community college's website to see the wide variety and increasing number of courses that are being offered online.

In addition, there is currently an absence of theory tailored specifically to online teaching and learning (Phipps & Merisotis, 1999). This study intends to utilize a constructivist lens to explore faculty perceptions of online teaching and learning in a rural community college system. Also, previous studies on the effectiveness of online courses have produced mixed results, with many researchers reporting reluctance on the part of professors to teach online courses (Florida State Board of Community College Systems, 2000). This study will explore the perceptions of the online learning environment of the faculty members in one rural community college in a mid-Atlantic state. Attention will also be given to community colleges and how they and their populations differ from traditional students at four year universities, and how their unique characteristics and

experiences may influence whether or not they succeed in an online environment. One facet of interest to this particular study is the rural aspect. The benefits and detriments of the online learning environment to the rural community college student will be examined.

## Literature Overview

The literature on online learning is growing, but inconclusive, and what literature does exist does not focus specifically on online learners in rural community colleges. Much of the literature on online education considers the impact of online learning from the students' points of view and examines courses at traditional four-year colleges and universities. A conflict concerning the effectiveness of online instruction also exists within the literature, with some professors' asserting that the online mode is superior, some asserting that online and traditional modes are equivalent, and others concluding that online instruction is inferior and less satisfying than traditional modes.

For example, a study conducted at Colorado State University determined that instructors of online courses found them very satisfying, and they were likely to teach additional online courses (Townley, 1997), and another study at California State University at Northridge determined that online students "tested 20% better across the board than their counterparts who learned in a traditional classroom" (CNET Staff, news.com, 1997, n.p.). Specifically, in this California State University study, Jerald Schutte, a Northridge statistics professor, randomly selected half of his statistics class to be taught in a traditional classroom environment, while the remaining students completed the class online. In the online class, Schutte utilized online text postings, e-mail, newsgroup postings, electronic assignments, and online classroom chats (CNET Staff,

news.com, 1997). Schutte found that online students fared better, but he admits that other factors such as more extensive collaboration among online students may have contributed to their higher success rates.

Furthermore, College.com's online study (2000) also stated that 62% of faculty members said their online students learned equally effectively in online and traditional environments, with 23% noting that their students learned better online (cdlponline.org, 2000). Russell (2001), a professor at North Carolina State University, examined 350 studies from 1928 to the present for the effect of online instruction on student learning outcomes, grades, standardized test scores, and frequency of interaction between students and faculty. Overall, he found no significant difference in technology-mediated classes and traditional classes when other variables were held constant. In short, Russell concluded that technology did not make a difference.

However, Phipps and Merisotis' (1999) extensive review of research on distance-learning published since 1990 analyzed the findings of the studies included in Russell's research and found problems with the quality of analysis as well as a variety of gaps in the research. Among these gaps were the studies' failure to explain why distance learners drop out of courses at higher rates than do their traditional counterparts, failure to examine the qualities of digital libraries, and failure to address how the differences in individual learning styles affect an online student's chances of success. Phipps and Merisotis also note that much of the research emphasizes student outcomes for individual courses rather than for entire programs.

Thus, as one might expect, in regard to online learning environments, a great deal of conflict within the literature exists, and many questions are left unanswered. The review of the relevant literature indicates wide discrepancies in the research as to the effectiveness of online instruction. The literature also suffers from a lack of a theoretical framework, and little attention has been devoted to online learning in rural community colleges. Indeed, the findings concerning online learning environments in general are inconclusive, and studies on online learning in rural community colleges are sorely lacking.

## Statement of the Problem

A great deal of conflict exists within the current body of literature on distance-education. Of particular interest for this study is that there is also a dearth of studies on online instruction and online learning in the rural community college setting. Also, community colleges serve very different populations than do four-year universities. Cohen and Brawer (2003) add that community colleges are "institutions that offer associates degrees and occupational certificates to their students and a variety of other services to the communities in which they are located" (p. xv). Cohen and Brawer go on to add that community colleges attract those who were not served by the traditional system of higher education—those who can't afford a traditional education, those who cannot attend college full time, those whose ethnic backgrounds inhibit them from participating in a traditional education, those whose educational process was interrupted, those whose jobs have become obsolete or who lacked training, and those who are confined by physical disabilities.

Thus, when one considers that the community college's non-traditional adult learner is an entirely different species than the traditional four-year university student, and one examines the number of conflicting studies as to faculty perceptions of the online experience, the theoretical issues, and the numerous other issues triggered by this relatively novel form of instruction, further studies on every aspect of online learning are warranted. Further, when one adds a predominantly rural setting, the study becomes even more significant.

## Statement of Purpose

The purpose of this study is to discern the nature of teaching in an online environment from a rural community college professor's perspective. The study will explore the following areas:

1. How rural community college teachers view online teaching and learning, specifically what they view as the advantages and disadvantages for them and for their students.
2. How the community college adult learner differs from the traditional four-year university student, and how these differences affect online learning.
3. What factors contribute to a successful online teaching experience in a rural community college.

## Theoretical Framework

Online instruction is a new phenomenon, void of a large body of theory specifically focused on this mode of instruction and learning. However, constructivist learning theories provide a good starting point and will be used as a framework for this

study. Wilson and Lowry (2000) believe that the Internet provides the means for realizing the visions of Dewey, Piaget, and Vygotsky, "who long ago advocated a constructivist or meaning-centered approach to learning and teaching" (p. 79). Wilson and Lowry add that constructivism advocates a learner-centered approach which emphasizes the learner's role in constructing meaning, requiring the learner to do more than simply process information. Krsitinsdottir (2001) adds that the basic challenge of constructivism is the changing of the locus of control of learning from the teacher to the student. Learning must be placed in a real world context.

Wilson and Lowry (2000), building upon Greeno's 1998 study on constructivism and middle school math projects, introduce three core principles vital to online learning. These principles include an access to rich sources of information, the encouragement of meaningful interactions with content, and collaboration among learners. Further, Matusevich (1995) advocates a constructivist learning approach, noting that "Constructivism focuses on knowledge construction, not knowledge reproduction" (p. 2). Collins (1991) adds that in order for technology to promote constructivist learning, there must be a shift from whole group to small group instruction; that coaching should replace lecture and recitation; that students must be actively engaged; that students will be cooperative and less competitive; that students will learn different things rather than everyone learning identical material; that visual and verbal thinking will be integrated; that teachers will focus on weaker, rather than brighter, students (Cited in Matusevich, 1995).

This study's link to constructivist learning theory is two-fold. First, this researcher will view the community college professors' perceptions of online teaching and learning through a constructivist lens, thus allowing the faculty participants to construct their own meanings based on their experience in the online classroom. Second, the researcher will investigate whether or not online instruction and learning are compatible with the tenets of constructivist learning theory. With this constructivist framework in mind, the following research questions were developed to guide this study.

## The Research Questions

The following questions will guide this study to examine community college instructors' perceptions of online teaching and learning.

1. What is the nature of teaching in an online environment in a rural community college setting?
2. What is the nature of interaction between instructors and students and among students in an online course?
3. How do community college instructors perceive the effects of online learning on their students?
4. What are the advantages and disadvantages involved in teaching an online course?

## Methodology and Design

This study utilized a qualitative design in which the researcher conducted interviews with a cross-section of community college instructors of online courses. The

community college's Dean of Instruction was contacted for the names of potential participants. The researcher conducted two pilot interviews and nine additional interviews from which the raw data for the study were gathered. The participants' permission was obtained to audio-tape all interview sessions, and the tapes were used to guarantee the accuracy of the transcribed data.

Upon completion of the interviews, the researcher formally organized and transcribed all of the raw data obtained from the interviews. The data in the transcripts were compared to notes taken during the interview, and any discrepancies in the researcher's notes were corrected. Participants were also given the opportunity to check their interview transcripts for accuracy.

In order to obtain a degree of triangulation in this study, the researcher secured permission to observe the nine participants' online classes. Permission to study other documentation such as course syllabi, discussion boards, and online tests and quizzes was also obtained.

Software designed for qualitative analysis was also used to examine raw data for patterns, and data were coded and presented in a case study format. The patterns were used to describe faculty perceptions of online instruction at the rural community college and to answer the key research questions.

## Definition of the Terms

The following terms are defined to assist the reader:

*Blackboard-* "a content system that enables every student and faculty member to manage their own Internet-based file space on a central system and to collect, share, discover, and manage important material from articles, research papers, presentations, and multimedia files" (blackboard, 2004 para 3,).

*Community Colleges-* "public, post-secondary institutions commonly organized into 2-year programs. These institutions offer instruction adapted in content, level, and schedule to the needs of the community in which they are located. They usually offer curriculum with transfer, occupational, general education, and adult education components (www.ericfacility.net, 2004, "community colleges").

*Cyberspace-* "the non-physical terrain created by computer systems" (www.webopedia.com, 2004, "cyberspace").

*Distance Education-* "education via a communications media with little or no classroom or face to face contact between students and teachers" (www.ericfacility.net, 2004, "distance education").

*Distance Learning-* used interchangeably with "Distance Education." (see "Distance Education" for definition).

*Electronic Mail-*also called *e-mail.* This refers to the delivery of printed messages through telecommunications terminals (www.ericfacililty.net, 2004, "electronic mail").

*HTML*-refers to "the language used in document creation on the World Wide Web" (www.webopedia.com, 2004, "HTML").

*Internet*-refers to an "international network of computer networks interconnected by routers or gateways and using standard TCP/ICP telecommunications to transfer data such as email" (www.ericfacility.net, 2004, "internet").

*Network*-refers to "a group of two or more computer systems that are linked together" (www.webopedia.com, 2004, "network").

*Online Course*-refers to "classes conducted remotely via computer systems, usually on the Internet"(www.ericfacility.net, 2004, "online course"). This term is also used interchangeably with "cyber course."

*Virtual Reality*-refers to "an artificial environment created by the computer in such a way that it appears to be a real environment" (www.webopedia.com, 2004, "virtual reality.").

In addition, throughout this dissertation, certain terms are used interchangeably. The words *instructor*, *professor*, and *teacher* are used interchangeably and refer to the person who is teaching the course. *Cyber, Internet,* and *online* are also used interchangeably and refer to any class that is taught online. Finally, the literature focuses on both online *learning* and online *instruction*, and the researcher used both of these terms throughout the discussion of community college instructors' perceptions.

# CHAPTER II

## REVIEW OF THE LITERATURE

The studies reviewed in this section demonstrate the varying viewpoints of educators and researchers as to the effectiveness of online instruction and learning. While some studies emphasize practical considerations such as cost, convenience, and the accessibility provided by online learning opportunities, other studies question the viability of online courses. Several studies indicate that students in online courses fare equally as well as their traditional counterparts, or even slightly better in some cases. But, other studies indicate flaws in the research and a lack of attention to student dropout rates, different learning style needs, and instructor bias.

This review of the literature is constituted of (a) a brief history of American community colleges, (b) an overview of online education and of the conflicting views of online education, (c) a description of the theoretical construct to be utilized in this study, (d) a description of online learning and the community college, and (e) a description of community college adult learners. The information included in the various sections in this literature review detail the pertinent issues concerning online teaching and learning such as the lack of theory and the lack of reliable findings on the effectiveness of online learning and online instruction. Furthermore, by explaining how community college, non-traditional adult learners differ from adult learners in traditional settings, the case is made for a study of rural community college instructors' perceptions of online teaching and learning.

## The American Community College

Cohen and Brawer (2003) define American community colleges as "institutions that offer associates degrees and occupational certificates to their students and a variety of services to the communities in which they are located" (p. xv). They add that there are approximately 1,250 community colleges in America, with enrollments that range from 100 to 30,000. And, enrollment in community colleges has increased by 700% since 1960 (Cohen & Brawer, 2003).

In tracing the origin and evolution of the American community college, Cohen and Brawer (2003) note that in the early twentieth century, community colleges were a product of social forces that created a demand for trained workers as well as a demand for social equality. They believe that Americans possess a need to be "sanctioned by an institution" and that the community college provides greater access to a higher education. These authors also believe that the shift from families to the workplace as far as training youth allowed community colleges to thrive.

Cohen and Brawer (2003) point out that community colleges were originally called junior colleges, and in 1922, a junior college was defined as "an institution offering two years of instruction of strictly collegiate grade (as defined in Bogue, 1950, p. xvii). During the 1950s and 1960s, the term *junior college* was applied to lower branches of private universities and to two year schools supported by churches or independent organizations. *Community college* gradually came to mean a comprehensive, publicly supported institution. (Cohen & Brawer, 2003). Cohen and Brawer (2003) define today's community college as "any institution regionally accredited to award the associate in arts or the associate in science as its highest degree" (p.5). The authors point out that comprehensive two year colleges and technical institutes, both public and private, are included in this definition.

In 1909, there were 20 junior colleges, and that number increased by 150 colleges within ten years. In 1998, there were 1,244 community colleges (Cohen & Brawer, 2003). Today, community college curricula encompass academic transfer preparation, vocational-technical education, continuing education, developmental education, and community service (Cohen & Brawer, 2003). At the end of the twentieth century, much of the institutional emphasis shifted to vocational interests because jobs were the primary focus (Cohen & Brawer, 2003). The American Association of Community Colleges (2005) states that currently, there are 1,173 public and private community colleges, and that if one includes branch campuses, that number increases to 1600. Approximately 997 are public community colleges; 145 are private, and 31 are tribal (Native American). Estimated enrollment is 10.4 million students. Forty-four percent of all undergraduates are community college students. These statistics testify to the fact that community colleges have long been a major force in education.

Community colleges change with the times, adhering to whatever the current, most pressing needs may be. They also reach out to those who are not served by traditional institutions of higher education such as those who cannot afford it, who can't attend full time, whose ethnic backgrounds exclude them from participating, who have inadequate preparation in lower schools, who are obsolete in their jobs or who have not been trained for any job, and for those confined by disabilities (Cohen & Brawer, 2003). Cohen and Brawer (2003) add, "[They] change frequently, seeking new programs and new clients. Community colleges are indeed untraditional, but they are truly American because at their best, they represent the United States at its best" (p. 36). The American Association of Community Colleges (2005) states of community colleges, "They have always been inclusive institutions that welcome all who desire to learn, regardless of wealth, heritage, or previous academic experience" (n.p).

For example, the state community college system used in this study (SVCC, 2005) had a total fall 2004 enrollment of 166,899 students, with 4,686 of those students being enrolled at the rural community college used in this study. Among this number, 130 students were enrolled in developmental (remedial) English courses; 329 students were enrolled in developmental math courses; 132 were enrolled in both math and English developmental courses. Only 1,359 students attended full time, as opposed to 3,327 who attended part-time. The community college's fall 2004 student body included 1069 ages 18 to 21; 424 ages 22 to 24; 746 ages 25 to 34; 644 ages 35 to 44; 580 ages 45 to 59. 1046 students were less than 17 years of age (high school dual enrollment students), and 177 students were greater than 60 years of age. The range of ages alone further complicates the definition of the non-traditional adult learner.

In fact, Finkel (2005) emphasizes the high school student factor, pointing out that though online courses are populated primarily with rural residents and/or working parents, their reach has been expanded to include high school students through dual enrollment options. And, in Massachusetts, a consortium of 15 community colleges is currently exploring how to incorporate online dual enrollment courses statewide. The impending onslaught of high school students, some as young as ninth graders, who will populate online courses in community colleges, adds an additional facet to the definition of the non-traditional community college student.

In conclusion, community colleges have served the diverse needs of non-traditional adult learners since their inception. The mission of the community college has evolved throughout the decades, and online learning in community colleges is the next logical step in this ongoing evolution; online learning has the potential to aid further the non-traditional adult learner in overcoming a variety of impediments.

## Online Learning and Community Colleges

In fact, according to the American Association of Community Colleges (2005), more than 95% of community colleges are Internet connected. And, in 2004-2005, the study's state community college system's FTES (Full Time Enrolled Students) boasted a total enrollment of 11,679 students in online courses, a figure that has doubled since the 2000-2001 academic school year (B. Vawter, personal communication, October 5, 2005). However, Kearsley (2000) notes that it is difficult to pinpoint the exact number of online college courses that are available because the courses take a variety of formats, but he acknowledges a clear trend for an increasing number of college courses to be offered online, with no on-campus counterpart. Vawter (2005) confirms Kearsley's point; he notes that the state system defines "online" as any course that is not a traditional, seated course. Thus *online* may indicate an Internet course, or it may mean the course is hybrid in nature or taught over some other technological medium. The system allows each of its 23 community colleges to determine its own definition of online instruction (personal communication, October 4, 2005). Still, in spite of the difficulty in determining exactly how many courses are offered solely online, it is evident that the number increases each year.

Of relevance to community colleges, Kearsley (2000) also believes that online learning provides students with a great deal of autonomy as far as when, where and how to learn, and he notes that this approach is student-centered. He cites some of the advantages of online education as collaborative opportunities for students and teachers, connectivity that is wide-ranging, student-centeredness (students determine the direction of their education), unboundedness (barriers to when and where students learn are removed), community (promoted by accessibility), and authenticity (the virtual world is closer to the real world than the typical classroom).

What Kearsley (2000) labels "unboundedness," (p. 5-6) is perhaps one of the most beneficial aspects of online instruction for the community college student. Gibson (1998) notes that in one community college course survey, 95% of students cited time constraints that barred them from attending on-campus classes as the single most important barrier to taking classes. Anderson (2004) adds, "The pervasive effect of the online medium creates a unique environment for teaching and learning" (p. 273), and she agrees that the Internet has the capacity to make large amounts of previously unavailable information accessible from home and work.

When discussing the effectiveness of online instruction, however, one must also consider the characteristics of the adult learner, specifically the non-traditional adult learner. Frank (2005), drawing on the ideas of Malcolm Knowles, describes adult learners as experienced, self-directed, varying in age, and unique in needs and experiences. And, Qureshi, Morton, and Antosz (2002) found that adult online learners at a four year university in Canada valued learning, were mature, experienced, realistic, and possessed competing interests. However, they were surprised to discover that their off-campus, online learners were also less motivated than their on-campus counterparts. According to Rowley, Lujan, and Dolence (1998), the fastest growing group of learners are the non-traditional ones who are seeking an education outside of a setting designed for full-time, resident undergraduate students. They attribute this demand for an education to a flexible workforce prompted by the information age. They recognize that non-traditional learners differ from traditional ones in that they want an education on their own terms—off hours, alternative sites, convenient times--and that many are not seeking degrees and see no value in a general education. Many of these non-traditional learners do not feel at home on a traditional college campus. Rowley et al. add, "Colleges and universities should know that this group is the early prototype of the information age learner and represents

the most current and immediate interaction between educational institutions and the information age" (p. 146).

Though online learning provides the access and lack of boundaries needed by the non-traditional learner, the learner himself must also possess certain characteristics if he wishes to succeed in the online setting. According to White and Weight (2000), not everyone is suited to online learning. The online learner must be willing to learn computer skills, must take responsibility for his/her own learning, and must be committed and motivated. But, one may infer that because of the community college's open door policies, all students will not necessarily possess the qualities necessary to succeed in an online environment. Still, enrollment in distance-learning courses in this study's state community college system has increased every year since 1996, with a total of 6,300 students enrolled in 1996 to a total of 57, 872 students enrolled in online courses in 2005 (VCCS, 2005). Whether or not online learning is best suited to non-traditional adult learners appears to have no effect on enrollment numbers in online courses; online learning technology came first, and the attention to benefits, detriments, and consequences appear to be afterthoughts.

For example, Saxon and Boylan (n.d.), in their synthesis of 18 studies on remedial community colleges students, described these students as "at-risk, underprepared, low-achieving, developmental, disadvantaged, non-traditional, and skill-deficient" (p. 1). They add that this is the segment of society that is getting left behind by a technology-oriented economy. Saxon and Boylan made numerous interesting discoveries about community college students, but of interest to this study is what they found about academic and non-cognitive profiles of remedial students in community colleges. They found that the mean high school grade point average was a 2.4, and the mean grade point average of the community college student upon completion or departure was a 2.28.

Also, of those taking SATs, 50% scored an 800 or lower. Remedial community college students also lacked self-regulating behaviors, academic aptitude, and critical thinking skills, according to Saxon and Boylan. Saxon and Boylan concluded that the only factor that separates remedial community college students from most other community college students is that remedial students have lower scores on institutional assessment tests.

Hence, one disadvantage of the open door community college system is that it may find many of its students ill-equipped for the demands of the online classroom, and its faculty may have problems addressing the students' lack of skills needed to succeed in an online setting. Illinois Online Network and Board of Trustees (2005) believe that in order for a student to succeed in an online environment, he must be open-minded about sharing experiences, able to communicate through writing, must be self-motivated and self-disciplined, must be willing to speak out about problems that arise, must accept critical thinking and decision making as part of the learning process, must be able to think ideas through before responding, must have access to a computer and modem, must be able to commit four to 15 hours per week to the course, and must believe that high-quality learning can occur in a non-traditional setting.

Further, community college students are not the only ones who are responsible for a successful online learning class. Much of the burden lies on the instructor. According to Frank (2005), teachers must have knowledge of adult learning theory, and they must use that knowledge to create effective online learning environments. Frank adds that adult learners must be engaged in their learning process; they must be given as many options for learning as possible; they must participate in collaborative activities; teachers must be facilitators, not lecturers. Much of what Frank advocates may be enfolded in a constructivist approach to online instruction. Frank concludes that for a community college professor to employ constructivist learning theory to online courses, he or she

must first know what constructivism entails, and Franks is not so sure that is always the case.

Moreover, Mullins (as cited in Finkel, 2005) raises concerns that community college faculty may feel threatened by online learning because the high demand for online courses may hurt enrollment in traditional courses, and she notes that some community college instructors have complained of a lack of interaction between students and instructors. But, Mullins adds that student and faculty e-mail allows for more interaction than a traditional course does.

Further, community colleges have always accommodated the needs of non-traditional adult learners (Cohen & Brawer, 2003), and online courses may provide the next logical step in this trend. For example, the single mother who cannot afford day care for her child may be able to complete her degree online and as a result improve her career opportunities. Clearly, the benefits of online courses such as "unboundness" and authenticity (Kearsley, 2000) are undeniable, but one cannot ignore the problematic issues that are embodied in this new educational technology. Consideration must also be given to student suitability to online learning (White & Weight, 2000), the characteristics of the non-traditional community college learner and how that definition may be rapidly changing (Saxon and Boylan, n.d.), and the instructors' knowledge of adult learning theory (Frank, 2005).

## Theory and Online Learning

Though technology in education is not new, online learning is such a recent phenomenon that no specific body of theory currently exists. It is this lack of theory that warrants further study on every aspect of online learning. Recently, there has been a move towards constructivist learning theory, a theory which claims that learners learn best when they learn from immediate application to acquire personal meaning (Ally,

2004). Constructivism assumes that learners are active, not passive, that one's knowledge comes from interpretation and processing of what is received through the senses, and that the learner is the center of knowledge. The instructor is considered a facilitator or mediator, and the major emphasis tends to be on situated or contextual learning. Cooperation and collaboration are also important to constructivism, and the learners are given control of their learning process (Ally, 2004). Time may prove that constructivism is an apt fit for online teaching and learning.

Moreover, Wilson and Lowry (2000) believe the Internet may be the instrument for realizing the vision of educators like Dewey (1938) who advocated a constructivist or meaning-centered learning approach to teaching and learning. They note, "Learners do more than process information—they build an understanding through interaction with their environment" (p. 79). They also add that constructivist learning happens constantly on the Internet and in classrooms. It happens every time people try to make sense of their environment. Wilson and Lowry bring to light an idea very relevant to this study—constructivism is more than just the method—it is a learning theory with implications for instruction. The technology of online learning and instruction possess great potential for a constructivist learning experience.

But, in order for online instruction to be effective, teaching methods and classroom environments must also change. A successful online classroom will entail more than just posting a traditional class syllabus on the Internet. As Collins (1991) pointed out, instruction must focus on small groups; students must be actively engaged; weaker students must be the focus; cooperation will replace competition; students will learn from different materials, and the traditional lecture will be a thing of the past (as cited in Matusevich, 1995). According to Wilson and Lowry (2000), meaningful interaction is a key component of the constructivist learning environment.

Further, Rodwell (1998) adds that constructivism is a philosophical framework and approach to research that assumes that reality is constructed and that this reality is based on inter-subjective meaning that cannot be generalized beyond the context of the encounter. Rodwell believes in the existence of networks of relationships that simultaneously produce multiple constructions of reality. Moreover, Phillips (1981) states that Piaget believed all knowledge is constructed, with content being only one aspect of a person's construction. Phillips notes that Piaget rejected empirical theories and considered himself a constructivist, noting that a person's experience within his environment enables him to construct a stable structure.

Furthermore, Morrison (2003) also believes that a merging of constructivist learning theory and principles with the online classroom is in order. Morrison experimented with agricultural leadership online programs and found evidence of constructivist learning. He did stipulate that in order for constructivist learning to occur, the teacher must have an understanding of the tenets of constructivism, must be aware of the extent to which his own assumptions about teaching and learning influence him, and must possess clear strategies on how to translate the constructivist principles into practice. Morrison stressed the need for collaboration among students and the need for an online community that encouraged holistic thinking.

Frank (2005) notes that the online class grounded in constructivist principles will lead to a learner-centered environment, and she credits the opportunities for collaboration, multiple options for learning, and flexibility in learning styles, time, and pace with making the learner-centered environment a reality. She also repeatedly emphasizes that community colleges professors must be grounded in adult learning theory and constructivist learning theory in order to maximize the potential for online learning to meet the needs of its diverse students.

However, though Morrison (2003), Frank (2005), and many others present constructivist learning theory as the appropriate framework for online learning, Doolittle (1999) contends that the relationship between online learning and constructivism is questionable. Doolittle believes that constructivism implies that learning must take place in a real world environment and that it must involve social negotiation and content and skills relevant to the learner, noting the importance of using prior knowledge as a framework. Doolittle also thinks that teachers should also be facilitators and guides, not instructors. Students should be self-regulatory, and multiple perspectives should be encouraged. Doolittle then proceeded to assign letter grades to the online classroom on many of these constructivist components, and his results were mixed, with real world environments and unique opportunities receiving top grades of *A*'s and *B*'s. However, the prior knowledge, formative assessment, and self-regulatory aspects all received a grade of *C*. He noted that online classes are not as fluid and flexible as face-to-face classes and that a student's prior knowledge is difficult to assess online. He also questioned the absence of formative assessment measures and their impact on online instruction, and he said that online students tend to lack the degree of self-regulatory skills needed to succeed in the online environment.

Grow (1991/1996) presents a Self-Directed Learning Model composed of the following four stages: Dependent, Interested, Involved, and Self-directed. Grow notes that there are low, moderate, intermediate, and high self-directed learners, and that the teacher's job is to match the learner's stage of self-direction with the teacher's style and to prepare the learner to move to higher stages in the model. Though Grow admits that true self-directed learning is a lifelong process, he also believes that the Stage 3 self-directed learner, the "involved" learner, will be involved in discussions, seminars, and group projects. In this case, the teacher's role is that of facilitator. The Stage 4 self-

directed learner will participate in internships, dissertations, individual work or self-directed study groups. In Stage 4, the teacher is primarily a consultant and delegator.

Robertson (2003) also questions the association between constructivism and online learning. She believes the link between constructivism and online learning is a contestable one that is the result of a technopositivist ideology that "perpetuates a naïve faith in the promises of technology" (abstract). In fact, Robertson examined many studies on technology and its ability to enhance education and determined that there is no definitive proof that technology improves education, and that most teachers are unaware of these findings. She makes the case that technopositivist ideology forces teachers to be enthusiastic about technology and often penalizes those who are not. Of technology, she notes, "Repeated frequently enough by enough sources, yesterday's propaganda becomes today's common knowledge" (p.2). Robertson gives one much to ponder when addressing the impact of online instruction on education.

Still, a great deal of the available literature supports, or at least implies, that constructivist learning principles may be conducive to the online learning environment. However, Doolittle does give one food for thought by reminding the reader that embracing constructivist learning principles will not eliminate all problems with online classrooms, and that one can't blindly take any theory into a setting and assume it is a cure-all for all situations. Robertson (2003) also adds a different angle on the relationship between constructivism and online learning. Thus, while constructivist learning theory may very well be the best approach to online learning and instruction, one must explore it in context and determine if the principles are working in reality.

In this study, the researcher utilized constructivist learning theory as a theoretical lens through which to view community college faculty members' perceptions of online teaching. The researcher used the tenets of constructivism to discover the nature of

teaching in an online environment in a rural community college setting and how community college teachers make sense of their experience in conducting online courses. The researcher also investigated the nature of interaction in an online environment in an attempt to discover if the online environment is conducive to constructivist learning principles.

The researcher used the criteria suggested in the *Technology Use Taxonomy* (North Central Regional Educational Laboratory, 2004) to determine whether or not the instructor's use of technology was conducive to constructivist learning principles. According to this evaluation plan, simulations, online research, and expression and visualization will be used to create authentic learning experiences in real world contexts in the constructivist learning environment.

## Online Education

The idea that one may now complete undergraduate and graduate degrees entirely online may prove startling to some; however, if one views the history of distance education, one should not be surprised at this next step in the evolutionary cycle of distance education. For example, Sherry (1996) notes, " 'distance education' and 'distance learning' have been applied interchangeably by many different researchers to a great variety of programs, providers, audiences, and media," (p.2) with the chief facet being separation of the teacher and the learner in space and time. She further traces the evolution of distance education from correspondence classes originating in Europe through instructional radio and television's rise in popularity in the middle of the last century. These forms had their drawbacks, mainly a lack of two-way communication between the teacher and the student. As technological advances continued, electronic mail (e-mail), bulletin board systems, the Internet, telephone-based audio and video satellite, and closed circuit television became popular. Sherry concludes with a very

relevant point--that today, there is no one best system of teaching with technology, and that the chosen form is determined by local resources, target audiences, philosophies, and geographic location.

Also, we are reminded that electronic learning is not new. In fact, computer based training was popular in the 1960s and 1970s, and multimedia-enhanced instruction progressed throughout the 1980s. Personal computers appeared in the 1970s, and the 1980s hailed the introduction of IBM personal computers (PC's), the Internet, and virtual electronic communities (Reisman, Flores, & Edge, Eds., 2003). Also, the market for fully online degree programs is growing 40% annually, boasting an enrollment of 350,000 in 2002. The United States is expected to spend $210 billion on such programs by the year 2010 (Reisman, Flores, & Edge, Eds., 2003).

Though the long-term consequences remain to be seen, the age of online and other technologically-based modes of instruction is now a reality, and the possibilities and opportunities will prove infinite. There are other factors to be considered, and these are practical in nature--cost and convenience. One source notes, "the cost of a virtual university would be 'less than the addition of a single classroom building on a physical college campus'" (McGovern, 1999, p.1). McCormick, Chancellor of Minnesota State Colleges and Universities System, says, "distance education is essential to the growth of higher education in the state. Online programs are meeting the needs of students, particularly those who live in sparsely populated areas" (Cited in Foster, 2003, p. 6). Berg (2001) surveyed 176 community colleges and four-year universities and interviewed 17 representatives from various higher education institutions, found access and the focus on telecommunication skills to be the driving factors in the community college's pursuit of online learning. He added that two-year colleges have been quicker to become involved in all modes of distance-learning than have four year universities.

In addition to practical benefits such as access and convenience, learning benefits also exist in the online setting. Furthermore, Schutte (1997), a California State University at Northridge professor, conducted a study on an applied statistics course, and he concluded that students learning in his virtual classroom "tested 20% better across the board than their counterparts who learned in the traditional classroom" (Cited in CNET News.com Staff, 1997, n.p.). Schutte stated that there were no statistical differences between sex, age, computer experience, or attitude toward the subject in the two groups, and that both groups were given identical tests in the same conditions. This study provided the first quantitative data on online education, and the results favored online courses over traditional ones. But, Schutte pointed out that students in online courses collaborated with classmates 50% more often than those in traditional classrooms, and that this collaboration may have produced the higher test scores.

Schutte (1997) also acknowledged that "online teaching won't solve all educational problems, virtual learning may have its limits," and that online courses " may only be useful in the abstract, only for certain kinds of classes" (Cited in CNET News.com Staff, 1997. n.p.). Thus, though initial results support online learning over traditional methods, other variables may have come into play, such as the student collaboration during online situations.

Another study reported by College.com (2000) stated, "Eighty-five percent of faculty teaching online said their students learned equally as effectively online as on campus, and some said their students did even better online than on campus. This study surveyed 250 faculty members, with 130 total respondents. Of these respondents, 62% said their students learned equally effectively, and 23% said their students learned better online, adding that "90 percent said they are satisfied with teaching online and most faculty found it as effective as classroom learning" (n.p.). Also, Valuck (2000), assistant

professor of pharmacy at the University of Colorado, claims that his online students participate more and perform "slightly better" than their campus counterparts (Cited in College.com, 2000).

In 2000, the Florida Community College Systems published an extensive report about online and teleclass courses in Florida's community colleges. The study was conducted during Spring 1999, and data were gathered from students, faculty, and administrators at eighteen Florida community colleges. A total of 153 faculty members participated in the study. Eighty-five percent of these faculty members were full-time employees with ten to twelve years experience, and most were teaching only one distance learning course, with an average size of twenty students. The report stated,

> Most of the faculty perceived distance learning courses to be a learning experience equivalent to the traditional classroom. However, 35% perceived it to be worse or ineffective. Fifty-eight percent of the respondents said they considered their distance learning teaching experience a positive one, and 85% of the faculty would be willing to teach another distance learning course (Florida Community College System, 2000, ii).

Further, Newman and Scurry (2001) note that 1,100 colleges and universities in the United States and elsewhere are offering online courses, with increasing enrollments. They contend, "a growing body of research is demonstrating that learning online can be both effective and satisfying for students" (Newman & Scurry, 2001, n.p.). They do not, however, elaborate on the elements of the studies or on the growing body of research on online learning. According to them, some of the strengths of the online programs are (a) they allow students to engage in active learning through software that offers hands-on experiences; (b) they allow students to connect learning and the real world through simulations and role playing; (c) they offer easy access to massive amounts of

information; (d) they allow faculty members to tailor their teaching styles to each student's needs; (e) they switch the faculty's role from information source to mentor; (f) they allow students to easily review previously covered material, and (g) they allow "preliminary experience in a safe setting" through the use of virtual technologies" (Newman & Scurry, 2001, n.p.).

Moreover, student comments found on this study's community college's webpage link entitled "Benefits of Taking a Cyber Course" ( SVCC, 2004) echo many of these same conclusions. Benefits include convenience, working at home, setting one's own pace, working independently, moving ahead of slower students, and flexibility. Carstone, an online instructor at the college, adds, "The best thing about teaching online is the flexibility in delivering content—when, where, and how I want" (personal communication, January 26, 2004).

As indicated earlier, many educators are apprehensive about online instruction. Daughty and Funke (1998) note "in higher education, faculty members are concerned with the quality and integrity of distance education programs"(p. 248). Weigel (2000) says, "A common concern is that an online course merely transfers lectures, readings, and tests from the classroom to the web, with an added discussion forum or email discussion list to answer students' questions" (p. 303).

Also, Carey (2001) addresses the premise that there are no significant differences in online and face-to-face student outcomes, and she cites a 1999 report from the Institute of Higher Education Policy which concluded that though hundreds of articles had been written on distance learning, only a small percentage contain original quantitative research, and those studies that are quantitative in nature are "methodologically flawed because of a lack of random selection, a lack of control for extraneous variables, a lack of valid and reliable instruments, and reactive effects" (Carey, 2001, p. 2). Carey also

claims that student differences, dropout rates, and different learning styles are not taken into account.

Carey (2001) emphasizes that theory relating to distance learning, especially online learning, is still in its early stages (p. 2). She contends

> The relationship between course delivery mode and course outcome is poorly understood. Most of the research indicates that there is very little difference in performance of students taking online courses and students taking face-to-face courses. Much of this research is suspect since it is often conducted by the instructors who are teaching the classes themselves. The instructors have vested interest in showing positive outcomes for the online delivery mode (p.11).

Carey (2001) raises some interesting questions about the nature of the research on online education and the motives behind the positive findings. She is not the only one with qualms about online instruction. In an earlier study, the American Federation of Teachers' Task Force of Technology in Higher Education deemed graduate programs taught entirely online "problematic," citing problems concerning a lack of focus and strategic planning (Cited in Blumenstyk, 1996, n.p.). Because of these concerns, the Task Force called on its members to oppose Internet courses and other courses delivered through technological modes (Blumenstyk, 1996). In support of this, Vogel, a professor at Northern Illinois University, says he doubts that "every innovation that captures people's imaginations has actual educational value" (Cited in Blumenstyk, 1996, n.p.), and he goes on to add, "We're skeptical of it as a replacement of the more traditional forms of education" (Cited in Blumenstyk, 1996, n.p.). Finally, Vogel says that he believes going to the library to conduct research is more beneficial to students (Blumenstyk, 1996). Blumenstyk (1996) gives the reader much food for thought, but his

article does not appear to be based on any solid study, rather it serves as a warning as to what may go wrong with online education.

Further, Arnone (2002), in his article entitled "Many Students' Favorite Professors Shun Distance Education" relates the tale of Marvin Druger, a very popular Syracuse professor who has instructed more than 40,000 students, many of them through distance education programs. Though Druger utilizes e-mail and course websites, "the professor's love of education does not extend to online courses" (Arnone, 2002, n.p.). Druger "fears students who work solely from books, cassettes, or on a computer will miss out on the sensory experience of the classroom and experimentation" (Cited in Arnone, 2002, n.p.).

Druger is not alone in these concerns. Students enrolled in online courses at the community college used in this study list disadvantages to taking online courses. This list compiled from student surveys features a diversity of complaints. They included concerns that: (a) students felt ignored by the teachers; (b) teachers were hard to maintain communication with; (c) online classes were too rigorous; (d) the lack of class discussion was detrimental; (e) less motivated students needed a push, which was unavailable in an online setting; and (f) questions were often misunderstood ( 2004). In support of this point, Kirschenheiter, a Columbia University School of Business professor who praises online teaching, does concede that there are drawbacks, among them the lack of personal contact and the lack of control over how he presents material (Cited in Carr, 2001).

Another study of New Jersey community colleges utilized a survey research design and a person-environment fit model to investigate the traits of students who were satisfied and dissatisfied with distance-learning. The study also identified dimensions of the distance-learning environment that influenced the satisfaction level of students (Williams, 2003). This study of student satisfaction with distance education classes in

New Jersey community colleges revealed that satisfaction was determined by the "extent to which hardware, software, and printed materials are user friendly" (Williams, 2003, n.p.). This study also indicated "secondary findings revealed dissatisfied students who generally felt disconnected from both faculty and other students, were not as comfortable with the hardware, software, and printed materials as their satisfied counterparts" (Williams, 2003, n.p.).

From the faculty point of view, the Florida State Board of Community College Systems' study on distance education (2000) reflects similar concerns, with 35% of the faculty perceiving distance learning as worse than the traditional classroom and even ineffective. This study attributes faculty members' lack of enthusiasm for distance learning to the greater preparation time required for distance learning, and the lack of adequate training to teach online was also cited as a contributor to faculty reluctance to teach online.

Finally, as online instruction and other forms of distance education evolve and become a major force in all educational institutions, its supporters and detractors will undoubtedly continue to debate the drawbacks, benefits, possibilities, and consequences. Early studies alluded to in the literature review will be replicated and expanded upon, and the call for more reliable and valid qualitative and quantitative studies will be answered by future researchers. This literature review captures both the perceived drawbacks and benefits of online instruction/learning. The perceived drawbacks of online instruction and learning include complaints of communication problems between teachers and students; excessively rigorous online courses; a lack of personal contact needed by the less motivated students; a lack of technological training for teachers, and a greater preparation time required for teachers of online courses. Some of the benefits include flexibility and access to an education that may otherwise be denied by geographical and

time constraints; the faculty role as mentor rather than information source; the student's opportunity to set his own pace, and student engagement in active, hands-on learning.

## Conclusion

Education is constantly evolving, as is technology, and the paths of these two entities have always crossed, and no more so than in the present. Online instruction is taking higher education by storm, and those who fail to adjust to this new mode of learning and teaching will undoubtedly be left behind. The studies reviewed in this chapter show divergent viewpoints among educators and researchers as to the effectiveness of online instruction and learning. While online education provides many benefits for the instructors and the students, such as reduced costs, easy access, and other conveniences, there are drawbacks, such as a lack of personal contacts, more preparation time, and high drop-out rates in online courses. The extent of these drawbacks and their impact on adult learners, especially non-traditional adult learners, has yet to be determined. More attention to the characteristics of the non-traditional adult learner and their role in determining the effectiveness of online learning and instruction is warranted.

Also, because this form of learning and instruction is relatively new, substantial gaps exist in the literature on online learning and teaching, and no solid body of theory exists at present. If constructivist classroom environments prove the key to a successful online learning experience, then one must also determine whether or not instructors are utilizing a constructivist approach. There are also very few studies that focus on online learning in rural community colleges, and this is an unfortunate because rural community college students possibly stand to benefit the most from the access provided by the online course option. This lack of information makes it difficult to determine whether or not the benefits will ultimately outweigh the costs. In this qualitative study, the researcher intends to examine rural community college instructors' perceptions of views of online

teaching and learning, and to ultimately use the data acquired in this study to make a viable contribution to the literature and to all of the stakeholders of online instruction and learning in rural community college settings.

# CHAPTER III

# METHODOLOGY

## Introduction

This study utilized a qualitative design in which the researcher conducted interviews with a cross-section of community college instructors in one rural community college setting. The researcher adopted a qualitative design because the study's research questions coincided with qualitative inquiry. The research questions focused upon community college instructors' perceptions and the meaning that these perceptions give to online instruction. Questions concerning the nature of online instruction, the interaction involved in an online course, and the perceived barriers and assets of online technology can best be evaluated by qualitative inquiry. Patton (2002) states, "The purpose of gathering responses to open-ended questions is to enable the researcher to understand and capture the points of view of other people without predetermining these points of view through prior selection of questionnaire categories" (p.21). Indeed, this researcher believed the points of views of the participants are the heart of this study, and they proved to be the keys to answering the study's research questions.

Along these same lines, another justification for a qualitative methodology was that qualitative methods allow the researcher access to "thick descriptions of the phenomenon under study" (Merriam, 1988, p. 27). According to Merriam, these thick and rich descriptions render a literal and complete picture of the phenomenon, enabling the researcher to accurately interpret the meanings. Patton (2002) echoes Merriam's thoughts on the necessity of obtaining thick, rich descriptions.

This chapter describes the research method that was used and is divided into the following sections: research questions, site, participants, data collection, interviews, observations, documentation, the Institutional Review Board, data analysis, delimitations, trustworthiness of data collection and analysis, and data reporting.

## The Research Questions

The qualitative approach to interviewing assumes that the world is continually changing, and it recognizes that what the researcher learns depends on who is interviewed and when he or she is interviewed (Rubin & Rubin, 1995). This fact implies that the researcher must be comfortable with uncertainty, and the researcher must be flexible, open, and capable of confronting whatever new ideas emerge during the research process (Patton, 1990). Additional questions did emerge during the various interviews, and new ideas were pursued.

However, the researcher never lost site of the key research questions that the study was designed to answer. The research questions that were to be answered by this study were as follows:

1-What is the nature of teaching in an online environment in a rural community college setting?

2-What is the nature of interaction between instructors and students in an online course?

3-How do community college instructors perceive the effects of online learning on their students?

4-What are the advantages and disadvantages of teaching an online course?

## Site

The community college featured in this study is a rural community college in a mid-Atlantic state. The college is a member of a state wide community college system, and the mission statement of that system is "to provide comprehensive higher education and workforce training programs and services of superior quality that are financially and geographically accessible and that meet individual, business, and community needs" (VCCS, 2005). The VCCS fulfills its mission by a commitment to (a) opportunity; (b) teaching and learning; (c) effective learning environments; (d) appropriate use of technology; (e) professional development; (f) community service, and (g) accountability (VCCS, 2005).

This study was conducted on two campuses of the rural community college. The campuses are approximately one hour apart. This community college is one of 23 community colleges in the state system, with an approximate enrollment of 6,000 students. Sixty-three percent of the students are female; the average age is 27, and the majority of students work full time and attend school part time. In fall 2005, this community college had 2473 non-curricular (non-degree) seeking students and 2390 degree seeking students. Degree seeking students are those enrolled in technical, transfer, diploma, associate, and certificate programs (Records and Registration, personal communication, July 25, 2006).

The college serves ten counties and one city, making it the largest community college service region (SVCC, 2005). The first campus is located in a rural county with a median age of 38.1; the average family size in three. Twenty-eight percent of the

residents are high school aged (grades 9-12), and 20.6% of residents are enrolled in college or graduate school. The median household income is $31,288. Also, 34.5% of families had a female household with no husband present and were classified as having *Poverty Status* in 1999 (U.S. Bureau of the Census, 2000).

The second campus is located in a rural county with a median age of 40; the average family size is 3; 24.2% of the residents are high-school aged (grades 9-12), and 9.9% of residents are college or graduate school enrolled. The median household income is $28,929; 26,918 men work full time, and 20,307 females work full time. Also, 31.6% of families had a female household with no husband present and were classified as having *Poverty Status* in 1999 (U.S. Bureau of the Census, 2000). Other counties served by this community college share very similar statistics with the two counties in which the campuses studied are located.

## Participants

The study participants represented a cross-section of community college instructors of online courses. Patton (1990) stresses that the logic and power of purposeful sampling relies upon the selection of "information-rich cases" for study, and the purpose of this type of sampling is to obtain data that will shed light upon the research questions. The researcher contacted the community college's Dean of Instruction to gain insight into potential participants who had varying degrees of experience of teaching online, specifically seven teachers with a minimum of four semesters of online instruction; one teacher who teaches a hybrid course; and one novice online instructor. Participants were of diverse racial backgrounds, from a variety of

disciplines, and represented both genders. Their online classes were composed primarily of rural students, though three of the nine participants did note that some of their students were from urban and suburban areas. The Dean of Instruction is a veteran teacher and administrator who works closely with teacher class assignments and teacher evaluations, and he is thoroughly grounded in online and distance learning issues through both his work experience and his own doctoral studies. Thus, he was in the best position to recommend apt subjects for this study.

The participants were first introduced to the study in writing. A request to meet the potential participant and the copy of Virginia Commonwealth University's Institutional Review Board's approved Consent Form accompanied the introductory letter. The researcher utilized the e-mail to schedule the interview sessions.

In order to protect the identities of the participants, a difficult task in such a small setting where everyone knows everyone else, certain safeguards were built into the study. First, participants were given pseudonyms, and rather than referring to the subjects they taught such as English or biology, general subject areas such as humanities and science were used. Participants were also given the opportunity to read the section of Chapter IV that featured the description of them and their teaching, and they were asked if the researcher's description was an accurate portrayal of who they were really were and if they felt their identities were threatened. The researcher made any requested modifications to the final chapter, including, in one case, the deletion of several quotations and personal details that could possibly identify the participant.

The table on the following page includes the pseudonyms and other facts about the study's participants.

Table 1: Participant Summary Table

| Pseudonym | Gender | Number of Online Courses Observed by the Researcher | Years Experience Teaching Online | General Subject Area |
|---|---|---|---|---|
| John Harmon | Male | 2 | 4 | Social Sciences |
| Jack Dawkins | Male | 1 | 10 | Math and Sciences |
| Rose Maylie | Female | 1 | 2 | Humanities |
| Agnes Flemming | Female | 1 | 10 | Healthcare |
| Agnes Wickfield | Female | 2 | 5 | Technology and Sciences |
| Mark Tapley | Male | 1 | 10+ | Social Sciences |
| Mortimer Lightwood | Male | 4 | 10+ | Humanities |
| Joe Nemo | Male | 2 | 1 | Social Sciences |
| Ada Carstone | Female | 1 | 8 | Business Science |

## Data Collection

Prior to conducting interviews with the study participants, the researcher conducted two pilot interviews. Pilot interviews were approximately 60 minutes in length, and they were audio-taped with written consent of the interviewees. The pilot interviews were unstructured and open-ended in nature. The raw data obtained from the audio-tapes were transcribed by a professional transcriber and analyzed by the researcher. The researcher utilized a qualitative software packet entitled NUD*IST 6 (QSR International) to analyze the transcripts from the pilot interviews. One purpose in analyzing the pilot transcripts was to help the researcher grow comfortable and adept with the software and the coding process. The raw data obtained from the pilot interviews were also used to aid the researcher in refining the interview questions that were used in the first round of interviews in the study. After conducting the pilot interviews, the researcher combined two questions, and corrected phrasing where necessary to ensure that the questions were useful in acquiring the needed data. The pilot interviews also allowed the research to gain experience with the interviewing process and to work out unanticipated problems with the recording equipment.

### The Interviews

The researcher conducted two interviews with each of the nine participants. All interviews were audio-taped with the written consent of the participants. The first interview was open-ended in nature, and data from this interview were used to further refine the semi-structured interview questions that were used in the follow-up interviews. The initial interviews varied in length, and none exceeded 80 minutes in length. The

initial interview questions were open-ended, but the follow-up interview questions were semi-structured, constantly analyzed and modified to reflect the initial analysis. As a result, all participants were not asked identical questions in the follow-up interviews. In reference to the interview procedure, Patton (2002) notes, "Interview questions will change over time, and each new interview builds on those already done, expanding information that was picked up previously, moving in new directions and seeking elucidations and elaborations from various participants" (p. 342).

A copy of the researcher's informal interview questions used in round one are included in Appendix A. Upon the conclusion of the first interview, the researcher immediately transcribed the notes taken during the interview, had the data tapes transcribed, and sent a copy of the transcript via e-mail to each participant to review for accuracy. Any discrepancies in what the researcher transcribed and what the interviewee said were noted and corrected. Only one participant required a change in the transcript, and this change was technical in nature.

After the participants approved the use of their transcripts, and after the researcher thoroughly studied the hard copies of the transcripts and formed potential codes, the researcher imported the transcripts into the qualitative software and began a line-by-line coding of the data. The researcher based the initial codes upon the study's research questions, the interview questions, and the possible codes that she discovered while studying the hard copies of the transcripts. The researcher also reviewed her notes from the interviews and her notes from the observations of the participants' classes for initial coding ideas. Upon completing the initial coding, the researcher merged codes where

appropriate and recoded as needed. After the initial coding was completed, the researcher drafted a list and explanation of her initial assertions and reported them to chair and committee. The researcher next met with the chair to discuss the initial assertions and to revise the rough draft of the researcher's questions for the follow-up interviews.

Follow-up interviews were conducted approximately one month after the first round of interviews. These interviews were approximately 30 to 60 minutes in length. There were two sources of questions for this round of interviews. The first source was the transcripts themselves. The researcher reviewed transcripts, observation notes, and documentation notes and composed individual questions for participants based on their responses in the first interview and based on what the researcher observed in the participants' online courses. The second source of questions was an evaluation tool recommended by a member of the dissertation committee. Since the theoretical framework of this study was based upon constructivist learning theory, this tool was used to aid the researcher in creating questions that would identify the presence of constructivist learning principles. A copy of the questions used in the follow-up interviews is included in Appendix C.

As part of the emergent design (Patton, 2002), the questions asked in the second round were based on the data from the first round of interviews, and the initial assertions from the first round. As with the first round of interviews, participants were again given a copy of the written transcript via e-mail and asked to correct any discrepancies

(McMillian & Schumacher, 2001). There were several corrections, but they were typos and technical corrections such as a spelling error made by the transcriber.

The researcher then added the transcripts from the second round of the interviews to the qualitative software. These transcripts were also coded line-by-line, and information was added to the existing codes. In addition, new codes were added where necessary. The researcher used the codes to analyze the new data and to confirm or disconfirm initial assertions. Patterns were identified using the existing codes and the intersect and matrix functions provided in the software program. The researcher also composed memos and reports and attached them to each code for her own use. A sample table of the matrix formed in the second round of analysis may be found in Appendix D.

The assertions from the follow-up interviews were reported to the dissertation chair and committee for their feedback. Additional analysis was performed. Then, the researcher and chair met to discuss the proper and best way to report the findings in Chapter 4.

Observations

The researcher used raw data from interviews as the primary method of information gathering, but Patton (1990) warns that when one relies solely on a single method, the study is more vulnerable to errors such as loaded interview questions or biased or dishonest responses. Thus a second method of data collection—observation—was used to triangulate the data.

The researcher obtained permission from the college administration, the technology coordinator, and the individual participants to log-on to each instructor's

Blackboard site as a "guest." The researcher observed all available online courses. Observations included observations of the interaction among students in the class and between the students and instructors. The number of classes observed for each participant varied from one to four, depending on how many courses the instructor was teaching at the time. One instructor used a personal website instead of Blackboard, so the researcher visited the site and observed four of his online classes. Field notes were compiled based on "guest" observations, and the notes were compared to the data obtained from the interviews. During the observations, the researcher was able to confirm the information presented in the interview sessions. No major discrepancies existed in what the researcher learned in the interview sessions and what the researcher saw in the online course. The researcher also looked for the presence of constructivist learning such as those examples provided in the criteria used in North Central Regional Educational Laboratory's (2004) *Technology Use Taxonomy.* Terms such as *simulations, online research, and expression/visualization* indicated the presence of constructivist principles. Though only one of the nine participants mentioned constructivist learning theory in our conversations, the researcher did find evidence of constructivist principles in some of the online courses.

The researcher followed the approved observation protocol found in Appendix B. The researcher also supplemented the observation protocol with her own thoughts and observations.

In addition, the researcher completed a one hour training session and observation of a new technology tool called *Breeze*. The researcher participated in this training

because one online instructor was currently using *Breeze* technology in her online course, and several other instructors mentioned the possibility of using *Breeze* technology in their online classes in the near future in order to resolve issues created by the limitations of dial-up Internet connections faced by many students in rural areas. The *Breeze* training and observation of one of the instructor's *Breeze* presentation confirmed that this new technology was in use and did hold promise for the problems posed by those who are limited by dial-up connections.

### Documentation

The final method of data triangulation was the review of available documents relevant to this study. The researcher read the various threads, completed online quizzes where available and studied ancillary materials such as glossaries, external links to important sites, and model assignments and papers. The researcher reviewed online grade programs, both the ones provided by Blackboard and a newer one entitled *SnapDragon.* The researcher also reviewed general documentation related to the online course offerings that the college provided on its homepage. Notes were compiled based on the documentation review, and the notes were compared to the data obtained from the interviews and the observations. Hence, the credibility of the researcher's conclusions was strengthened through the use of data triangulation constituted of interviews, observations, and documentation.

## The Institutional Review Board

This proposed study was submitted to the Institutional Review Board for approval. All required consent forms and other protocols were completed and followed.

Upon receiving approval from the Institutional Review Board, the researcher immediately began the interview process.

## Data Analysis

In this study, the data analysis was ongoing. Raw data were transcribed and analyzed with qualitative software (NUD* IST 6). The software aided the researcher in organizing, coding and analyzing the raw data. The *Technology Use Taxonomy* model (North Central Regional Educational Laboratory, 2004) aided the researcher in coding and analyzing the data. The taxonomy was particularly useful in creating questions that measured the presence of constructivist learning activities and principles.

After each round of interviews, the participants were given the opportunity to review their comments and the researcher's assertions for accuracy. The researcher corrected any discrepancies, though only two instructors requested corrections to the transcripts, and they were of a technical nature.

These data were placed into initial categories based on the researcher's study of the transcripts, the researcher questions, and the interview questions. Patterns in the data were noted, and initial assertions were formed. Initial assertions were sent to the researcher's chairperson and committee for feedback. The initial assertions and chair person's feedback were used to create the questions for round two of the interviews.

## Delimitations

The purpose of this study was to examine online teaching and learning from the perspectives of rural community college professors in one specific community college setting. Due to the specific setting, the findings of this study may not be readily

generalized to all community colleges, especially to urban community colleges. However, the nature of qualitative inquiry is not to generalize. One of the purposes of this study was to contribute to the gap in the literature concerning online instruction in rural community colleges. Thus, the findings still proved extremely useful in meeting that goal.

Another delimitation of this study was that each participant was not asked identical questions in the follow-up interviews. However, the intent of using an emergent design and open-ended interviews was to draw upon the participants' unique experiences and to use them to answer the research questions. If all participants were asked identical questions created by the researcher alone, very important data may have been lost simply because the researcher, who is not an instructor of online courses in a rural community college, did not know or think to ask something vital to shedding light on the participants' experiences and perceptions.

A final delimitation dealt with the researcher's subjectivity. While the researcher was confident that she possessed the integrity and the intellect to conduct the study and accurately report the findings, the researcher is no stranger to online instruction or to adult education. Several years ago, the researcher taught adjunct English classes at the community college level, and she enjoyed working with non-traditional adult learners. The data triangulation, the input from the participants on their transcripts and sections in Chapter IV, and the dissertation chairperson aided the researcher in disciplining her subjectivity. Participants also read the summaries and interpretations of their interview

sessions and were given the opportunity to provide feedback and make corrections where necessary.

The researcher utilizes Blackboard technology with her own English and research classes. The researcher is also a great fan of the Internet, and upon completion of the doctoral degree plans to seek employment in a rural community college setting. The researcher would like to teach online courses or to manage a community college's online curriculum. Hence, not only does the study have the potential to contribute to the literature on online learning, it may very well aid the researcher in fulfilling long-term career goals. The researcher did feel a degree of discomfort with one of the findings, but the dissertation chairperson built in safeguards to deal with this problem. Specifically, the researcher found some evidence that four of the nine instructors and one instructor who participated in the pilot interview believed that their particular students were not intellectually, and in some cases technologically, prepared to learn online. The perception that the students' more urban counterparts were better prepared academically for the online classroom seemed to exist. However, when the participants were given the opportunity to read the findings, one of these participants retracted his statement because he said he had no evidence to support the claim. This retraction bothered the researcher because this particular participant was the most vocal about this issue in the first round of interviews.

Finally, in addition to the use of pseudonyms, the chair and researcher decided to keep the institutions and the counties served anonymous. This safeguard was not initially included in the methodology, but was added after we realized that is extremely difficult

to protect people's identities in a setting where everyone knows everyone else, and where some subjects only have one instructor for both campuses.

## Trustworthiness

From the onset of the study, participants were treated with the utmost courtesy and respect. They were informed that their identities and their specific sites would be kept anonymous. A simple coding system was used to identify each participant. The researcher used fictitious pseudonyms. Also, in the initial interviews, all participants were informed that the data gleaned from their interviews would be used in the researcher's dissertation, and that the dissertation would be published, and that the findings would be shared with the community college president. Participants were given the opportunity to clarify or correct any discrepancies in the written transcripts, and that they were given the opportunity to withdraw from the study at any time. No one withdrew from the study. Patton (1990) adds, "Validity and reliability of qualitative data depend to a great extent on the methodological skill, sensitivity, and integrity of the researcher" (p. 11). The researcher was confident that she possessed the skill, sensitivity, and integrity necessary to conducting viable research without harming the participants or the participating institution in any way.

## Data Reporting

In the very early stages of the research process, the researcher gave serious thought to how the findings of this study would be reported. Several options existed. Among these options were those of reporting the findings by research questions or reporting the findings by case studies. For this study, the researcher's preference was to

report the findings by case studies. This preference may be attributed to the researcher's prior degrees in English literature and with the researcher's love for a good story. The software used in this study also allowed for an efficient and effective analysis and reporting of the data by case study. The researcher went to great lengths to capture the voice of each participant and to accurately portray who that person really was, and a case by case presentation of the data aided in this process. Chapter IV details the findings of this study. In Chapter V, the researcher discussed the patterns, themes, and findings of the study and the possible implications for online instruction and learning in rural community colleges. The researcher also made recommendations for the community college and for future studies based on the data, the study's key findings, and the questions raised by the study. Limitations of the study were also addressed.

# CHAPTER IV

## Findings

### Introduction

The following chapter consists of a report of the findings from this study. The information will be presented participant by participant, and all information presented is derived from the two interview sessions with each participant, the observations of the participants' online courses, and the review of related documentation. The chapter concludes with a presentation of patterns and disconfirming evidence.

The instructors interviewed were from a variety of subject areas, and the lengths of their experiences teaching online varied. The following instructors shared their experiences and viewpoints of online teaching and learning: John Harmon, Jack Dawkins, Rose Maylie, Agnes Flemming, Agnes Wickfield, Mark Tapley, Mortimer Lightwood, Joe Nemo, and Ada Carstone.

### John Harmon

John Harmon, a social sciences instructor, teaches two online courses and three seated classes per semester. He has been teaching online courses for four years, and his online courses have an average enrollment of 22-30 students. He said that all of his students come from the rural service area. He believes in a practical approach to teaching, and he views teaching as a partnership with his students. He believes he and his students should work together towards a common goal. He said the learning experience should be practical, hands-on, and as exciting as possible.

When asked what he thought of online teaching and learning, he said, "The killer of online learning is repetition and monotony." As a result of this belief, he tries to vary the technology that he uses in his online classes. For example, he said that when he first taught online, he assigned a chapter and gave a quiz repeatedly throughout the semester. Since that time, however, he has added discussion threads, introductory videos, external links featuring models and guided tours, and simulations to his online classes. For example, the observation of the online course confirmed that the instructor posted introductory photos, 10 external links, including those to APA sites for formatting papers and other resource sites/groups that relate to the course content, and at the time of observations, he had nine active discussion threads, with the number of student responses ranging from 11 to 133. A typical discussion board assignment required the students to read a chapter, complete a quiz, write a response, and to post their reflections on the discussion board. For example, students were required to respond to threads centered upon the Terry Schiavo case. They had to reflect upon the case and the ethical issues involved, and they shared their reflections on the discussion board. Students are also required to read true stories centered upon issues studied in the course and to complete reflection papers. These papers are e-mailed to the instructor. The instructor's Blackboard site indicated that the main sources of knowledge in his courses are Blackboard content, the textbook, and the resources provided by external links.

Mr. Harmon also values interaction, both between him and his students and among students in the class. The main venue for interaction between Mr. Harmon and his students is via e-mail, but he is accessible by phone and in person. His students are

required to post and to respond to others' Blackboard discussion threads weekly, and he incorporates group projects into his classes. These projects require students from the same county to work on county specific assignments that relate to the course's key objectives. In one project, after researching issues in the field, students draft a letter to a professional and then share and reflect on the responses on the discussion board. Students are also required to consult outside resource people, conduct online research, and to bring their personal experiences into the course through interacting on discussion threads. The class observations confirmed that students are required to interact regularly on the discussion board, to read a great deal independently, to complete online quizzes, and to submit weekly assignments.

Mr. Harmon believes flexibility is the biggest benefit of online learning. He teaches students who work rotating shifts, and he said that his students would be unable to attend school if they had to attend during traditional hours. The online course offerings meet their scheduling needs by giving non-traditional students access to classes and degree programs that they would otherwise not have. Other benefits include an increase in the students' levels of technological proficiency, an increase in the required amount of writing, and the acquisition of time management skills. A documentation review of Mr. Harmon's syllabi and quizzes confirmed that students are required to read assigned chapters and to post their reflections on the content on discussion threads. Another assignment required the students to write a reflection paper and e-mail the Word document to the instructor.

When asked to describe his views of the downside of online learning, Mr. Harmon said, "I'm sure your students benefit from your character and your attitude, and I just don't feel like they always get that online. I think you get the material, for sure, but I don't think you get anything else. I'd like to think that I'm giving my students more than just what the book says. I think there's a component of just who the teacher is that doesn't always get translated to the online learning." Mr. Harmon emphasizes that he requires regular interaction to help offset this problem.

Mr. Harmon also said because most of his students live in the rural service areas where Broadband Internet access is unavailable, they are limited by dial-up Internet access. He does use an introductory video, but he has to provide other formats of the information, such as Word documents instead of the video, for those who are limited by their dial-up access. He said it is fair to say that dial-up has limited technology use in the past, but that he has found ways to combat the dial-up problem, such as a "duality of methods." (smaller files, less PowerPoints, documents instead of videos). He also pointed out that technology is constantly improving, and that programs such as *Breeze* (*Breeze* will be explained and addressed in Chapter 5) have the potential to combat the problems posed by dial-up.

Mr. Harmon added that online teaching requires more preparation on the part of the teacher. He said, "In all honesty, it's easier to do an online course if you don't care. If you don't care, you can pick up a book, do the quizzes, and go. But, if you care and you—I find myself going, ok, you know, this assignment is a little boring, so what am I

going to do to pick it up." He also adds, "I definitely spend more time throughout the semester online, just responding to problems and things like that."

Another relevant point that Mr. Harmon made is that anyone can succeed online, but it takes motivation and responsibility on the part of the student. He believes the student must be more motivated, more mature, and willing to be an active participant in his education. For example, he notes, "If something's not going exactly right or they don't understand something, they need to contact the instructor. They really need to be more active in their education." He emphasized that the successful online learner must be self-motivated. He said, "you've gotta be your own watchman." He has experienced some problems with students who think as long as they get all the work in by the end of the course, that they will be fine. He noted this problem does not occur in seated classes. Another disadvantage to having students online is that the lack of face-to-face contact makes it difficult to tell when students are having problems with assignments, course content, etc. In a seated class, he states, "I can look at their faces and see if they're confused and address it. I don't have that here."

Finally, though Mr. Harmon feels not all teachers are ready to teach online and that the administration may be rushing people to go online, that the college does do a good job of offering training opportunities for teachers. He adds that the burden of learning how to effectively teach online rests with the teacher and with the college. He recognizes the practical benefits and learning benefits of online learning for his students.

## Summation of Key Points

Mr. Harmon recognizes that online courses suffer from a lack of face-to-face contact, and he offsets this problem by emphasizing teacher-student and student-student interaction. E-mail and discussion threads are used regularly to establish and maintain interaction. Mr. Harmon combats the problems posed by dial-up Internet access by varying his presentation methods, and he is optimistic that the ever continuous evolution of technology will eventually eliminate the dial-up problem. Mr. Harmon is also cognizant of both the benefits and the detriments of online teaching and learning. He realizes that the online course offering allows him to reach a segment of the population, that segment that works full time and can't attend school during traditional hours, and he also realizes that the online course places additional and increased preparation demands on him as the instructor, and that they require a student to be self-motivated and mature in order to succeed. Finally, Mr. Harmon's online courses' emphasis on interaction, reflection, students' personal experiences, and his use of simulations and online research demonstrate the presence of constructivist learning principles.

## Jack Dawkins

Mr. Dawkins, a veteran online instructor with ten years online experience in the math and sciences, teaches all of his classes online, and he has a total enrollment of approximately 60 to 100 students each semester. He said that while some of his students come from the rural service area, many of them do not; his student population is statewide; he teaches many students who are taking his courses for transfer credits or prerequisites for four-year colleges or universities. Mr. Dawkins considers himself "an

old-fashioned teacher," noting that he does not require a great deal of technology and/or software programs. He utilizes the textbook and Blackboard software to deliver his course content. He believes his role is to guide students through the material, and that the students' role is to be responsible for their own learning.

When asked what he thought of online teaching and learning, he replied, "Given the choice, I would teach in the classroom any day. I would choose that any day because I miss knowing who the students are." But, he added that he understands the need for online learning, and he is not going to "fight technology." He also vehemently defended the integrity of online courses, and noted that people who raise this issue have no proof that cheating is not an issue in seated courses.

Mr. Dawkins interacts with his students through e-mail, over the telephone, and face-to-face. He says his students are welcome to come in and see him, but there are those students who never call and "zip right through" the course. In the past, he tried discussion board and chat rooms, but he did not care for them, noting, "They start on course material, but the next thing you know, they slide downhill into a big gripe session about the technology." And, he added that the main reason he stopped using discussion threads and chat rooms is to prevent students from interacting with each other. Mr. Dawkins does not want his students to interact. He believes his course is individualized and that students need to learn the material on their own. A typical assignment requires students to read and study the assigned chapters and to complete online quizzes on the material. Students are allowed to check the results of the quizzes, and explanations for each question are provided. He does not use discussion threads, and he does not share

student names within the class. He says, "I try to keep them as separate as possible." He keeps them separated to preserve test integrity. A review of Mr. Dawkins' online courses confirmed the absence of student interaction. No student discussion threads or external links were posted. Mr. Dawkins posted 30 announcement from August until April, and the announcements included technical information about the course—introduction to the course, due dates, and location of assignments.

Like Mr. Harmon, Mr. Dawkins believes that flexibility is the biggest asset of online learning. He said, "We're lifting a big burden off of their schedule. It lifts the time constraints from them. They can work when they need to." He said that many of his students work on his course in the middle of the night after their kids have gone to bed and that if not for the flexibility of the online course offering, they would be unable to go to school.

As far as learning benefits for his students, Mr. Dawkins said that the online student is forced to read the textbook more than a student in a seated course is and to seek other sources of information, resulting in his or her being better prepared for college courses. Forcing the students to read the book, "makes them a little more independent and I think that's valuable because down the road, as you know as a graduate student, you have to be a lot more independent." The researcher reviewed chapter assignments and quizzes. Each was composed of multiple-choice and true/false questions, and students were allowed multiple attempts to take the quizzes. Upon completing the quizzes, students were provided with program generated explanations of the correct answers. The

teacher also provided supplementary documents on content-related information. These documents included hints, guidelines for solving problems, and answer checks.

As far as benefits to the instructor, Mr. Dawkins said that other than the flexibility for him, there really aren't any other benefits for the instructor, and he reiterated that he still prefers the seated classroom to the online one. Throughout our conversations, Mr. Dawkins noted repeatedly that he did miss the face-to-face contact, and that he preferred seated courses to online ones.

Mr. Dawkins feels one detriment of online learning is that even though he is accessible to his online students, and even though he has quite a bit of contact with them, "It's nothing like in the classroom." He also said he often finds himself addressing the same questions 50 times, and if he were in the classroom, he could address it once with the entire class. And, though his students are much more proficient in technology than they were when he began teaching online, and he does not find the limitations posed by dial-up access to be an issue, there are some times technical problems with Blackboard, such as when tests lock up and deny students the time to complete them. He has a college employee who deals specifically with technical problems, while he deals with course content issues and questions. As far as the dial-up issue, the researcher used a dial-up connection to view a student self-test that the instructor had posted, and it took a great deal of time to load on dial-up. Mr. Dawkins said the dial-up issue was not a problem because many of his students are transfer students from urban areas, but if he does have students from the rural service area, the researcher found the dial-up access to be an issue with the student self-test and the online quizzes.

As far as teacher preparation, Mr. Dawkins said that six or seven years ago, he would have said online teaching requires more preparation than seated courses. However, he said that his preparation time is actually less now because he has established the class. He periodically modifies the course tests and quizzes to preserve integrity, but the course content and layout itself does not change a great deal. Seven of the study's nine participants do not share Mr. Dawkins' viewpoint about the preparation being less than that of a seated course.

As far as who succeeds online, Mr. Dawkins said, "I always lose a small group of students. If they are not responsible, motivated students, they tend to leave things for the last minute." According to Mr. Dawkins, students who need a great deal of structure may not be suited to his online course because it is not as structured as a seated course. He said, "I don't like to have a lot of real strict deadlines because I see my class as provided for those people who can't sit in a class every week. I'm afraid if I change it to a more structured environment, I would lose those people. And, they have no recourse." Interestingly, Mr. Harmon agrees that students must be motivated and responsible in order to learn online, but he differs from Mr. Dawkins in that he finds that strict deadlines and required weekly contacts help students avoid procrastinating on completing assignments.

Finally, though Mr. Dawkins may prefer the seated to the online course, he teaches solely online. He recognizes that the online medium, though not perfect, provides an opportunity for those students who need flexibility in their schedules. And, though online teaching may not be his first choice, he does believe the integrity of the

class is equal to that of seated courses. He contends that the concerns about the integrity in online courses come from teachers who do not teach online. He said, "You don't hear it among online teachers."

### Summation of Key Points

Mr. Dawkins differs from the other participants in that he sees student interaction as having the potential to damage the integrity of his course; he believes his students need to work alone and to learn the material on their own. He does not use student discussion threads, and he does not encourage students to communicate with each other. Mr. Dawkins also prefers the seated to the online course, but he recognizes the value of the flexibility that online courses offer his students. He also cites a key learning benefit for his students as the online course's increased requirement for reading on the part of the student, rendering them better prepared for college. Mr. Dawkins also differs from Mr. Harmon and others in his feelings about teacher preparation: he believes that after the online course is established, the preparation time for him is less involved. He does not believe a great deal of technology is needed to teach his course; he confines his technology to the Blackboard announcements and online quizzes. Finally, Mr. Dawkins strongly believes that the integrity of an online course is just as good as that of a seated course.

## Rose Maylie

Rose Maylie is a veteran teacher with over 30 years teaching experience in the humanities. However, she is relatively new to the online classroom. This semester, she taught one online class with a small student enrollment. She became interested in

teaching online because she "likes to learn new things" and because she found that online courses were causing a decrease in enrollment in seated courses. She said, "I think that a lot of the reasons I did it online was in self-defense, too. Everything's going online, and it was taking my students away from my seated class. So, that was part of it. It drains off the population you have." Mrs. Maylie also believes her job is to instill a positive attitude about reading and writing into her students. She notes, "My goal is to teach and to delight." She also sees herself as a facilitator of learning who should provide rapid feedback to her students.

When asked what she thought of online teaching and learning, she said, "I don't think they get as much from an entirely online class. But, it helps them tremendously because they have jobs; gas is expensive." She prefers a hybrid class to a totally online class, and she said that the frequency of contacts with her online students rendered her class informally hybrid in nature, adding that students drop in the office and telephone regularly, and she also requires them to attend campus for presentations and tests.

In fact, Mrs. Maylie values interaction, both between the students and herself and among students in the class. She is very enthusiastic about the subject she teaches, and her desire to share that enthusiasm drives the interaction component of the online course. She communicates with students via e-mail, discussion boards and announcements on Blackboard, over the telephone, and in person. She also requires her students to interact on the discussion board. She also posts a discussion thread where students are free to talk to each other about anything related to the course. Students use this thread not only for content questions but for practical items such as due date reminders. The course

observation confirmed the presence of the discussion threads. A typical discussion thread requires students to read selections, reflect upon them, and post their reflections. One thread required students to compare and contrast readings in *The Bible* and *The Koran.* The instructor also provides feedback on the discussions. Students are also required to integrate the discussion thread content into their formal papers. Mrs. Maylie has not experienced problems with dial-up because she has not used a great deal of advanced technology to date, and she also cited *Breeze* technology as a possible remedy for any dial-up issues that may arise in the future.

Mrs. Maylie believes the chief benefit of online learning is the flexibility it affords the students. Online courses provide access to students who work and who have families. Convenience is another benefit she cited. A practical benefit that she mentioned was that online courses do not require a certain number of students in order to make, thus a course may be taught online with a handful of students, whereas if it were seated, the course offering would be dropped due to lack of required enrollment numbers. She also believes that discussion threads can be rich sources of interaction for students. The observation and documentation of her online course confirmed her belief in the importance of discussion threads with ten posted threads and with the number of student comments under each thread ranging from 1-30. The threads included multiple entries by each student and by the instructor. She said the amount of preparation required for her online course is comparable to the amount required for her seated courses. Increased preparation time for online courses is not an issue with her.

Mrs. Maylie talked at length about some of the problems she has experienced with online teaching and learning. She believes her personality is better suited to the seated classroom, stating, "What I enjoy most about my job is seeing them face-to-face." I'm not fully adapted to the cyber world." She finds that students are much more proficient with technology than they were two or three years ago, and that most have no problem with navigating Blackboard, using the Internet, and sending e-mails. She utilizes discussion threads, but she admits it is hard to capture her enthusiasm online. She is not sure that her great love of the subject comes through online as it does in the seated class. She has also experienced problems with students who expected the course to be less demanding than a seated course, and then they had problems when they found this was not the case. Like Mr. Harmon, she now combats this problem by providing strict deadlines. The course observation confirmed this point; the instructor posted approximately 1-2 announcements each week. These announcements concerned due date reminders, discussion board reminders, schedule changes, comments on students' work, and directions for visiting the grade program.

Of further interest, one major detriment specific to her setting is that she said many of her students are not intellectually prepared for the online learning experience. She said many have no background in the fundamentals, and often "they're not academically or intellectually up to it." She said, "Our students, I think, are fairly weak compared to the community college system as a whole." She added that students with accountability issues usually drop the course within the first four weeks of class.

When asked what it takes for a student to succeed online, Mrs. Maylie provided a great deal of information and one specific example for whom the online classroom is working. She said that the student who succeeds online has to be self-taught and in charge of his own learning. She notes, "They have to get it on their own." They also have to do a great deal of extra reading and writing. They have to read the material, and she states, "They were already pretty smart to begin with." She compared her online class to the British method, saying, "Here's the material, you learn it on your own. Come talk when you have problems." She also said that she has never had a student who registered late for the course to succeed in the course.

On the other hand, she provided an example of a non-traditional adult learner for whom online learning works. This person has been in the workforce for 20 years and has decided to pursue a teaching career. He is taking online courses to refresh his memory and basic skills, and he has had to work on his technology skills. To date, he has been very successful, receiving *A*'s in all of his classes and learning a great deal. But, she said, he has learned things he never learned in college when he was younger, but "I don't think that's a function of the online courses as he grew up and really wanted to learn." Thus, the student's maturity, intelligence, and motivation may attribute to his success in online courses.

Finally, Mrs. Maylie prefers the seated classroom to the online one. However, she is a life-long learner who is willing to try new ideas, methods, and technologies. She recognizes the practical needs for online course offerings, and she recognizes the characteristics that make a student successful online. She also believes her online classes

are well-organized. However, she realizes that many students have readiness issues, and she feels her personality and enthusiasm are better conveyed in the traditional classroom setting. In our final conversation, she said in the future, she would teach hybrid courses, but she felt that this semester would be her last one of teaching a purely online class.

## Summation of Key Points

Mrs. Maylie appreciates the opportunity to learn new ideas and teaching methods; this desire to continue learning combined with the realization that online course offerings were pulling students from her seated classes, prompted her to teach online. She does not feel online courses are as good in quality as the seated ones, and she really feels like her enthusiasm for her subject is best conveyed in the traditional, seated classroom. However, she also recognizes the benefits that online learning provides for her students. As the other participants, she believes flexibility and convenience are great assets for students who have many other commitments.

Mrs. Maylie also believes interaction is valuable, and she requires a variety of interaction in her online courses, both among students in the class and between her and the students. Discussion thread assignments require students to reflect upon the assigned reading and to share their reflections with each other. She also noted that her students collaborate with each other because they know each other from seated courses. These opportunities to interact and collaborate demonstrate constructivist learning principles.

Finally, she believes that online learning works best for students who are intelligent, motivated, and self-taught. She has serious reservations about particular students being ready to learn online.

## Agnes Flemming

Agnes Flemming, a health care instructor, differs from the other eight participants in that she currently teaches one hybrid course, meaning that she has both the online component and the seated course. She refers to her course as "Internet-assisted." She has been teaching online for eight years, and her class enrollment averages 15-26 students per semester. Mrs. Flemming believes everyone is accountable for his own learning, and that everyone learns differently, necessitating a "multi-modal approach" She feels there is no one best way to present the course material, so the more variety a teacher offers, the better for her students. She also believes the teacher should be a knowledgeable and nurturing role model. In addition, the teacher must possess integrity and must be a disciplinarian.

When asked what she thought of online teaching and learning, Mrs. Flemming said that in her specific area she is training people to be health care professionals; therefore, there must be a seated component to the course. She believes certain aspects of her class such as how to dress, talk, and act in a professional setting can only be taught in the seated classroom. In fact, she said, "I really don't like a purebred seated or a purebred Internet anymore. I like the hybrid best." She feels the seated portion of the course allows the needed face-to-face contact, while the online portion provides additional resources and opportunities, making "my life 80% easier." Mrs. Flemming gave an example of how the online part of the class makes her life easier as the opportunity to post the day's documents and announcements prior to coming to school, freeing her to tend to other urgent matters while at school.

Mrs. Flemming places a great deal of value on interaction. She interacts with the students in the seated portion of the class, but she also interacts with the students over the e-mail and on discussion threads. She also utilizes the *Breeze* technology provided by Blackboard to interact with her students. Students are also required to work together on group assignments, and they work with outside resource people. Her course requires students to work in a real-life health care setting, hence the opportunities for interaction with her, with each other, and with outsiders are numerous. An observation of the online portion of this course confirmed that students interact with her and with each other on discussion threads. Students are required to participate in the discussion threads based on content studied in the course, and their discussion thread comments constitute 10% of the final course grade. The course had five posted threads, with the number of responses for each thread ranging from 33-44. The instructor posted the topics, and students were required to respond to her topic and to each other. The instructor read student discussion threads, and she sent feedback on these responses to students individually. She explained that she e-mailed her feedback rather than posting it in order to avoid embarrassing the student if he/she had posted an incorrect answer.

Mrs. Flemming believes that there are many benefits to learning online. She said the online course offers flexibility, an alternative for the time-challenged and distance-challenged student; visual learners also like the online component, and there are practical benefits such as if a student loses a document, he/she can easily retrieve it online. She said the online component also forces students to apply and integrate technology. The course observation confirmed the need for the students to utilize technology. Students

must complete ten online quizzes, and they were required to visit as many as 12 external links to course-related content. The teacher also posted 35 announcements throughout the year. The use of interaction, online research, discussion threads, and experiences in clinical settings demonstrate the presence of constructivist learning principles.

There are also benefits for the instructor. Online instruction provides her with flexibility. She mentioned being able to get her class organized and relevant documents and assignments posted from home before she leaves for work, resulting in a much smoother work day. She said once she creates the class, it is easy to keep the class updated and that the online part provides the opportunity for her to communicate more with her students. Also, when she is unable to teach class because of a conference, meeting, or other obligation, she tapes her lectures and presents them through *Breeze*, and by doing so, avoids loss of instructional time. The researcher observed an online *Breeze* lecture posted by Mrs. Flemming. Several other participants mentioned the possibility of incorporating *Breeze* technology, but to date, Mrs. Flemming is the only one who has begun to use it. Mrs. Flemming utilized this technology to provide a lecture and Powerpoint presentation for her students. The researcher also participated in *Breeze* training which confirmed Mrs. Flemmings' assertions about the capability of *Breeze.* Mrs. Flemming's hybrid course utilizes the online part of the course as a supplement to the seated component. She uses the discussion threads for additional opportunities for interaction, and she uses other parts of Blackboard to provide announcements and additional resources. And, as with *Breeze,* the online part serves as a substitute when she is required to be absent.

When asked to discuss the downside of online learning, Mrs. Flemming cited a technical issue: a power outage and other technical problems can frustrate progress. She said that feelings of alienation are a problem in purely online courses, but because her course has a seated component, she is able to combat that problem. Another potential detriment is the dial-up Internet problem. However, Mrs. Flemming circumvents this issue by recording lectures and Powerpoints and utilizing *Breeze* to deliver them to the students. She also said that since her class requires the students to attend class on campus, students who have dial-up issues are able to use the open computer labs and library computers on campus.

Increased preparation time for the teacher is also a negative side of online teaching. Mrs. Flemming said it takes a great deal more work and time to teach online because she feels the need to have the entire class designed and posted before the course starts, noting that she does not feel this pressure with a purely seated course. She states, "It takes me hours to prepare one, get all the documents ready, make sure they're updated. And, even when you're going back and running the same course again, you've got to go back and change the dates, change this, change that. So, I spend a lot of time on those."

Mrs. Flemming was very clear about who succeeds and who does not succeed in an online course. She said online students must be able to read well, and they must have "exploring minds." She said they also need to be a bit "computer savvy." Students are required to access the course several times a week, making self-directedness and self-motivation requirements for online success. In both conversations, Mrs. Flemming

strongly emphasized that developmental (remedial) students should not take online courses. In the second interview, she mentioned this point again, and she explained that she feels this way about developmental students in online courses because developmental students do not usually have very good reading comprehension skills, and many do not know how to work a computer, manipulate the Blackboard buttons, or find all of the necessary course material. She said, "They're just not sophisticated enough to manipulate all of the little tools to actually get all they need out of the course." She added that developmental students are the ones who need face-to-face contact the most, making them the least likely to succeed in a purely online course. She concluded, "If it is a truly online course that is all online, it's all e-mail, you never get to sit anywhere with the instructor, you need to be an advanced student." A similar point about problems with student preparedness to learn online was made by Mrs. Maylie.

Finally, after teaching purely online and teaching hybrid courses, Mrs. Flemming has found that the hybrid course works best for her course and her students. She greatly values face-to-face contact; in fact, as a trainer of professionals, she believes it is vital to the success of her students. She also recognizes the value of the Blackboard component, and she uses it to provide additional opportunities for interaction. Because she also sees her students in the seated class, she is able to counter any limitations that may come with the online package while taking advantage of the best of what online has to offer.

## Summation of Key Points

Mrs. Flemming differs from other participants in this study in that she is the only one who teaches a hybrid course, referring to it as "Internet-assisted." In fact, she does

not favor one type of course over the other; instead, she prefers a combination of face-to-face and the online course. Mrs. Flemming values interaction, and she requires it both online and in the seated classroom. She utilizes the best that the online course has to offer—discussion threads, external links, and recorded and live *Breeze* presentations, and she supplements for any shortcomings in the online classroom when she meets the students face-to-face. She also recognizes the practical benefits such as posting work from home for her as the online instructor.

A key idea that Mrs. Flemming repeatedly emphasized was the need to ensure that developmental (remedial) students do not take online courses. She strongly believes the developmental student lacks the reading comprehension skills and technological sophistication to learn online and that this type of student needs face-to-face instruction the most.

Because Mrs. Flemmings' class is Internet-assisted and not totally online, she is able to circumvent many of the problems caused by lack of face-to-face contact and by technological limitations when she meets for the seated portion of her class. Indeed, Mrs. Flemming appears to have successfully combined the best of both worlds. Mrs. Maylie also prefers a hybrid course to a totally online course.

### Agnes Wickfield

Agnes Wickfield, an instructor in technology and sciences, has been teaching online courses since 2001, and each semester, she teaches four seated courses and one online course. Her online course enrollment averages 15-20 students per semester. Her student population is predominantly composed of students who live in rural areas. Mrs.

Wickfield believes the faculty is responsible for teaching, and the student is responsible for learning. She believes there is no substitute for good teaching, and faculty must get students actively engaged in the course. She added that teachers have to be proactive with contacting students, conscientious about grading, and they must use different types of teaching tools such as presentations, practice exercises, and demonstrations.

Mrs. Wickfield interacts with her students primarily through e-mail, Blackboard discussion threads, over the phone, and she also provides feedback through the postal mail. She encourages her students to contact her and to visit her office during office hours. Her syllabus is posted and includes all contact information. Students are required to contact her each week and to log-on to Blackboard to submit weekly assignments. Student participation in threaded discussions is also required. The observation of her online course and the review of her documentation confirmed what she said about her course requirements and content. She also provides links, posts assignments, and gives feedback to her students. A typical external link directed students to information about technology and software required for the course, and discussion threads dealt with such relevant issues as identify theft. Students are required to interact on the discussion threads, and these discussion threads are graded. On the date that the observation occurred, there were 12 active discussion threads. Mrs. Wickfield's courses demonstrated principles of constructivism through the use of interaction on discussion threads, time built in for reflection on assignments, the use of real-life examples, the use of online research, and the use of simulations such as those provided by MacroMedia Captivate, a program which records keystrokes and other activities. This simulation

program enables students to see demonstrations, such as how to create tables. The program also simulates Powerpoint, allowing students to view Powerpoints without requiring them to have the software. Mrs. Wickfield added that she requires her students to work through online tutorials, and these tutorials provide students with the opportunity to absorb and reflect upon material presented in the chapters. Finally, Mrs. Wickfield requires her students to use online search engines to conduct further research on content presented in the text. She added, "They do a lot of online research."

Mrs. Wickfield discussed numerous benefits of online teaching and learning. She believes that online learning requires students to be responsible for their own learning, to take ownership of learning and the instruction that she provides, and to spend more time with the material than they would in a seated class. She said because she does not see these students in a seated class, they are required to read more material, to print notes, and to study more. She said her online students also become problem-solvers in a technical sense—if they are having problems with software or e-mail attachments, for example, most will try to solve the problem on their own before contacting her. The online classroom also allows students to work at their own paces, and it solves practical problems posed by childcare and transportation needs. She also believes the quality of the content in an online course can be just as good or better than the quality of the content in a seated course, but she notes that some times the quality depends on how much the instructor is willing to do. She notes, "You can't just haphazardly add things and do things; you have to really be organized and very conscientious." She said she gives better written instructions online, and that she is able to stick to her schedule easier in an online

course because she designs the whole course and posts it before the semester starts. A review of the available documentation confirmed that very specific directions for assignments are provided. She also includes an online textbook companion that provides students with information on how to utilize the software required for her class, and students do use tutorials to aid them in completing assignments.

Mrs. Wickfield, echoing Mrs. Maylie, cited a practical benefit of online teaching. She said that because online courses do not have the minimum student enrollment requirement that seated courses have, they do allow her to teach classes that would not make if they were taught seated. She cited a summer course that she teaches as an example of a class that would be dropped if it were not offered online. Mr. Nemo, Mr. Tapley, and Mr. Lightwood also mentioned the benefit of being able to offer classes that otherwise would not make. Another practical benefit of an online course is that they save space. A physical classroom is not needed because the class does not meet face-to-face, thus saving the college money and freeing up the space for other uses.

In both interviews, Mrs. Wickfield emphasized that online teaching provided no benefit to her personally because any benefit such as flexibility, was offset by the increased preparation time required to teach online. She echoed Mr. Harmon when she said, "if you do it well." In reference to the preparation required, she said,

> I would say it's much, much more preparation, if you do it well. There are some faculty members that just really go overboard to do what they can to make sure that the online students have the same benefits as the seated classes. They post all of their notes in electronic

> format and post them into Blackboard. They make sure they post hyperlinks on their pages to take them to the place that they need to download files. And it takes time. It takes time to do online tests, surveys, to add discussion board topics. It takes time to put up notes and to organize things according to how the class is structured. And, you can't just haphazardly add things and do things; you have to be really organized and very conscientious.

Mrs. Wickfield also noted that if her students do not contact her regularly, she contacts them, and this contact requires a great deal of time on her part. She said procrastination on the part of the student can result in the loss of contact and the loss of rapport.

In addition to the increased preparation time to teach online, Mrs.Wickfield noted that there are also detriments for the online learner. She said some students just need face-to-face contact. Her class is also grounded in technology, especially software, presentations, and online demonstrations, and she notes that the limitations posed by dial-up access interfere with her technology use, as the majority of her students live in rural areas and do not have Broadband access. For example, she has to keep file sizes smaller to accommodate the Broadband deprived student, resulting in her deleting the audio portion from her presentations. Mr. Harmon and Mr. Tapley both mention the difficulties that videos pose for students limited by dial-up access.

Mrs. Wickfield also mentioned that another detriment is that some times there may be some question as to who is really doing the work. She notes she takes steps to

ensure integrity, such as changing tests, labs, and assignments, but "you still don't know who the person is on the other end actually doing it." But, she agreed that if someone really wants to cheat, he will, "even in a seated class." While Mr. Dawkins did not think integrity was an issue, Mrs. Wickfield mentioned the possibility of cheating in online courses, and Mr. Nemo cites major problems with cheating in online courses.

Mrs. Wickfield said the successful online student is self-disciplined and self-motivated, and he/she does not procrastinate. These characteristics are cited by almost every participant in this study. They also "have to be very conscientious about locating their assignments, knowing when the due dates are, submitting them on time, contacting their instructor if they have questions." She reiterated that the successful online student must be willing to take ownership of his learning.

On another note, Mrs. Wickfield builds in exercises that force students to demonstrate their readiness for online learning. Mrs. Carstone, as will be explained later, uses a similar approach. They are required to e-mail files, navigate Blackboard, type Word documents, and use the Digital Drop Box feature on Blackboard early in the course. She said her students' technology skills tend to be good because technology use constitutes the bulk of her course, and the students know the technology requirement upfront.

Finally, Mrs.Wickfield agrees that some students require face-to-face contact and may not be suited to the online classroom. She also recognizes the practical and learning benefits associated with the online classroom, as well as the detriments. She particularly emphasized that the increased amount of time for the preparation and management

involved in teaching an online course outweigh any benefits for the instructor. And, while dial-up limitations are an issue, she devises varies ways to combat the dial-up problems.

## Summation of Key Points

Mrs. Wickfield values interaction with her students and among her students. In fact, she requires weekly interaction. In addition to e-mail, the telephone, opportunities for office visits, and discussion board threads, Mrs. Wickfield, like Mr. Tapley, also interacts with her students through the postal mail, providing written feedback via the U.S. Mail.

Like the other participants, Mrs. Wickfield sees flexibility as a key benefit for her students. As far as learning benefits, she believes her students really learn the material because they are forced to read and study, and she believes they become technology problem-solvers when they take courses online. Mr. Dawkins also cited the fact that they spend more time with the text, and as a result, are better prepared for other college courses.

In both interviews, Mrs. Wickfield confirmed what Mr. Harmon mentioned, that online courses require a great deal more work if the instructor wants to do it well. She stressed that the increased teacher preparation to teach online nullified any benefit as far as flexibility that she would have as an instructor.

Mrs. Wickfield has also found that because the majority of her students live in rural areas and do not have access to Broadband technology, that dial-up can be an issue as far as the amount of technology that she can use in her online courses. She omits

audio from her presentations to help her students with the slow-download times posed by dial-up connections.

Mrs. Wickfield, like the other participants, believes a successful online student is one who is self-disciplined and self-motivated and does not procrastinate. To be successful online, the student must be actively engaged and willing to participate.

Finally, Mrs. Wickfield does not believe that teaching online is better than teaching in a traditional seated course, but she does recognize the practical and learning benefits for her students. She also believes the teacher can make the course content just as rich as that of a seated course if she is willing to spend the extra time preparing and maintaining the course.

### Mark Tapley

Mr. Mark Tapley is a veteran instructor in the social sciences, who has taught online and seated courses for many years. He currently teaches four online classes with a total online enrollment of approximately 100 students. Eighty percent of his students are from the rural service area served by the college. Mr. Tapley describes his philosophy as a belief in "a value added education." He recognizes that students don't all come into his classes at the same level, and his goal is to increase their abilities while in his class. He said, "I teach skills, not self-esteem." He believes that students learn best when they are engaged and when they are challenged, so one of his goals is to challenge students beyond what they can currently do. One of the biggest challenges for his students is meeting the writing requirements of his courses. He views himself as a "course manager" in the online course, where he views his role in the seated course as a "knowledge

expert." He explains, "I'm a manager, I'm a course manager. Rather than being a teacher in a classroom, I teach and interact with students and things happen. But, online, that's not going to happen. I just manage. Here's what you go, here's what this, here's where we're going now." When asked to clarify this statement, Mr. Tapley explained that interaction between his students and him occurs naturally in the seated classroom, but that because he is not physically present with the online students and because his role is different online (course manager) than it is in a seated class, it is more difficult to interact with the online students.

Mr. Tapley pointed out that it is difficult to build rapport online, but that he does so with individuals and in small steps and gradually moves to more complex interaction. He begins with stories and moves to more general information. He provides written feedback on every assignment, both via e-mail and the postal mail. Students are free to call or visit him, but he noted that the general expectation is that most students will never see him face-to-face. Mr. Dawkins and Mr. Lightwood, while accessible if a student wishes to see them, also said that they have students that they will never see face-to-face. Students also interact with each other on discussion threads. Discussion threads included practical information about due dates and how to approach assignments. The instructor also uses the threads to answer any questions that students may have about assignments and content. Mr. Tapley responded to each student's discussion thread posting. One sample discussion topic that involves a real-life situation is that concerning the theory of McDonaldization. Students study this theory and reflect upon how it applies to real-life. Chat rooms are not utilized because when he used them in the past, they tended to be

dominated by one or two students who posted a great deal of material not relevant to the course. Students also interact with outside resources. In addition to interacting with the instructor, they must write and send letters to local newspaper editors, and conduct interviews with various people outside of the classroom. The letters to the editor and the interviews are directly related to the content of the course, providing an opportunity to interact with those in real-life settings.

A review of Mr. Tapley's online courses confirmed the use of discussion threads, the presence of model papers, and the availability of external links to outside resources. Ten discussion threads were currently in use, and there was a great deal of interaction between the teacher and the students on the discussion threads. The instructor's syllabus also discussed how cyber courses differed from traditional seated course, such as the fact that they have no seated class meetings and that it's possible that the student and teacher will never meet face-to-face; he emphasized that most contact would be through the e-mail and the discussion board. Links to the college's library and to outside writing resources are provided. Students are required to read chapters and take online quizzes. They also have to read the text, complete quizzes, and write five reaction papers. A reaction paper requires students to read a portion of the text, discuss the main arguments in the text, to define and explain his stance on the issue presented in the text, and to document his sources. Very specific guidelines as far as paper format are provided. The instructor provided a step-by-step explanation of what each section should include, and he posted model papers. Finally, though dial-up frustrations greatly inhibit the use of enhanced technology, Mr. Tapley does incorporate some simulations into his course. One

such simulation related to the content of a particular course included mice running through a maze.

Mr. Tapley discussed numerous benefits of online teaching and learning, both for him and for his students. As far as students, there are both practical benefits and learning benefits. He cited convenience and time-shifting as practical benefits for students. One learning benefit he stressed was the fact that students "really learn how to write." His courses are writing intensive, with the predominant assignment being reaction papers with time built in for reflection, and he feels his students leave with better writing, documentation, and research skills. One writing assignment required the student to read the text, to discuss the main arguments, and to explain his stance on the issues presented in the text. In addition, the student was required to write up a formal APA paper based on the readings. Sample papers were provided on the Blackboard site. He also noted that his online students learn self-discipline from the course, and that the online classroom provides an opportunity for shy people to provide input and interact. Another learning benefit Mr. Tapley mentioned was that because his students are at such different levels academically and technologically, they get a great deal of individualized attention. He said in a class of 30 students, some times, he feels like he is teaching 30 different classes, and though this need for individualization creates more work for him, it can be a benefit for the student--the attention afforded to individual needs. For example, Mr. Tapley responded to each student's discussion thread posting, and he provides extensive written feedback on their papers. He addresses individual weaknesses and strengths through the written feedback.

Another interesting point that Mr. Tapley made is that many of the best academic students enroll in online courses. He explained that several years ago, when the college first offered online courses, he saw a dramatic change in the composition of his night courses, noting that "When Internet classes began, what it started doing was siphoning off the good students out of the classrooms. The highly motivated students, the well-prepared students, and the cutting edge students started disappearing from the classroom. Online, I started finding those students again." Mrs. Maylie spoke of online classes draining students from the seated population.

Another benefit that Mr. Tapley, like many of the other participants such as Mrs. Maylie and Mrs. Wickfield, mentioned is that because online courses do not have minimum student enrollment requirements that seated classes have, he is able to offer classes that he would not be able to offer if they were seated. He is also able to collapse two related courses online, so that the same students are allowed to receive credit for two courses.

Mr. Tapley said the biggest benefit of online teaching is a personal one. He noted that he also has other interests which require him to travel a great deal, and that he does not live in the area. The online offerings allow him to come to the campus twice a week, instead of five times a week. He said, "My largest benefit is that it allowed me to go ahead and take my life in alternate directions. I have gone as high vertically as I can without going into some other field or some other area. So, it allowed me to expand in a broader sense." He added that he works for the college seven days a week, but he is only physically present on campus twice a week. He said, "I like it better because I have other

obligations. I've got the flexibility. Two weeks ago, I taught a class from the Grand Canyon...This week, I'll be in Asheville, North Carolina. So, I can teach from anywhere."

Mr. Tapley also discussed the problems with online learning. He believes it is more difficult to develop rapport online, and that face-to-face contact is better as far as developing full relationships with students. He also said that many of his students are very weak academically and that they many of them are not proficient in the basic technology skills needed to succeed online. He also said that a lack of time-managements skills can be a problem. He explained, "We have one of the lowest levels of remedial competency in the state. What I mean by that is that many of the other community colleges in the state, in order to get out of a remedial course, require you to perform at a higher level." He added, "I feel like it is bothersome in my class, simply because the students are not prepared after finishing their remedial work." He also gave an example of a student who was still having problems formatting and e-mailing her work to him during the final week of class. The student received an *F* in the course because she still had not learned how to submit her work electronically and in the appropriate format. Mr. Tapley was the only participant who really stressed students' deficiencies in technology skills as being a problem. However, even those participants who said it was not a problem, did say that students who can't handle the technology component drop the course. Mrs. Maylie said people with technology problems are usually gone in the first few weeks.

The limitations posed by the lack of Broadband access also hamper his use of technology. He admits it is becoming less of a problem as time passes, but there are still students who can't get streamed videos, visual images, etc. He told of one student who had to leave her computer on for an entire night in order to download a video clip. His intent was to use videos to aid in developing rapport with an online student. But, because of these issues, Mr. Tapley keeps the technology use in his online courses as simple as possible. Mr. Harmon reported similar strategies for dealing with this issue. Mr.Tapley said, "I try to design my course so that it has a minimum of technology requirements. I know that some students are using dial-up, so I try not to put fireworks explosions on the screen." He also noted that many of his online students do not have their own computers, and when they use computers in institutions, they are often limited as to what and how much they can download. While online research is required, and he uses model papers, discussion threads, and the textbook offers supplemental CDROMS, videos and simulations are not incorporated into the online course.

As far as the teacher preparation required for an online course, he notes that the teaching is more contractual and that the teacher must be more prepared in advance. He feels there is not as much flexibility in preparing for an online course as there is for a seated course. He said he works much harder to ensure that his online instructions are clearer and that deadlines, grading scales, and rules are posted. The documentation review confirmed this point. Mr. Tapley posts documents with specific testing instructions which include warnings about procrastination and Blackboard overloads, time frames for completing assignments and tests, and directions for reporting errors. He

also posts an *Email Protocol Document* in which he explains the proper way to address an e-mail to an instructor, and includes a document entitled *Frequently Asked Questions.* This document answers practical questions about paper requirements and APA format. He said as far as preparation, in a seated course, he teaches, whereas in an online course, he manages. He believes the online course requires more technical preparation, whereas the seated class focuses more on content. He noted, "Online teaching's more contractual, so the online class does not have the flexibility that a seated class would have. I work a lot more with content in the seated class." He feels that the online class requires more structure and more attention to technical aspects such as deadlines, grading scales, and rules, and he adds, "In seated classes, we are always looking at new content. But then I teach in a seated class, and I manage online." Throughout the interview sessions, when speaking of his role in an online course, Mr. Tapley called himself a "task-master" and a "task-manager."

Mr. Tapley pointed out that though many of the good students resurfaced in online courses, he does have problems with students who are not prepared to learn online. At this point, he described the type of student who succeeded online. He views the successful students as "explorers, writers, contributors, and developers." Students who are willing to grow have a better chance of succeeding in an online course. He believes that students with more solid foundations in reading comprehension, writing skills, and subject-verb agreement tend to do better online. They have to be willing to meet deadlines and to contact the instructor if they have problems. Procrastinators have problems in online classes. He noted, "Some students I think get through the course and

gain very little. Other students come through the course and gain a great deal." He reiterated that though he is not an English teacher, everyone is an English teacher first, and that it is not enough for a student to have great ideas—he must also know how to write. Throughout both of our conversations, he repeatedly emphasized the importance of basic writing, reading comprehension, and research skills to the online learner. Mrs. Flemming also emphasized reading comprehension skills.

Finally, Mark Tapley greatly values the flexibility afforded by the opportunity to teach online. In fact, he said that if not for the opportunity, he would no longer be in the classroom. The convenience and flexibility offered to him free him to pursue other interests while still teaching. He also has strong views on what the student may lose and what the student may gain from learning online. According to Mr. Tapley, whether or not the student succeeds in or gains anything from an online course depends greatly on whether or not he possesses the fundamental skills and the self-discipline to learn online. For Mr. Tapley, the online learning experience has pros and cons, but overall, the flexibility if affords compensates for the problems that may arise.

## Summation of Key Points

Mr. Tapley recognizes the learning and practical benefits that online courses offer his students. He views the flexibility and the fact that the students really learn to read and write online as key assets of online learning. He is also very open about the problems his students experience in online courses. He has experienced frustrations that stem from problems that the dial-up access causes for his students who live in rural areas. He limits his use of technological tools because of the dial-up issue.

Mr. Tapley differs from the other participants in one major respect: he finds that many of his students are not technologically adept enough to navigate the online course. However, though the other eight participants said most students could navigate the courses and that a lack of skills was not an issue, one of the pilot participants did say, "We don't control who comes into our class, so many times a student has never had a computer class. So, you spend half the semester teaching them how to use the computer." Mr. Tapley is frustrated by the lack of basic skills on the parts of the under-prepared students, but he finds great joy in teaching those really good students who have resurfaced in his online courses.

Mr. Tapley's online courses do indicate the presence of constructivist learning principles. Students have many opportunities to interact with him and with each other. They also interact with outside resource people such as interview-subjects and editors of newspapers. He also uses simulations of model papers and activities that require mice to proceed through mazes, and real-life examples such as online research on the theory of McDonaldization, and his reaction papers provide time for reflection. Though Mr. Tapley does not feel that interaction comes as naturally in the online course as it does in the seated course, interaction is still a major component of his online course. And, though dial-up does limit some use of technology, he does utilize some simulations and models.

Mr. Tapley recognizes that there are pros and cons to learning and teaching online, and he does believe face-to-face instruction is more effective than online instruction. He gave an example: "A telephone conversation is valuable and can get the

information across and some relationships and interaction can occur over the telephone. However, the face-to-face interaction can develop a full relationship and a lot more." However, one practical benefit, the flexibility it affords him as someone who lives a great distance from the college and as someone with other professional obligations and interests, is what keeps him in the profession. The online teaching option enables Mr. Tapley to continue teaching while pursing his other interests.

### Mortimer Lightwood

Mr. Lightwood is a veteran teacher in the humanities who was one of the first teachers at his site to teach online. He offers eight classes online, and he prefers the online work. He no longer uses Blackboard, rather he runs his online courses through his personal website. He considers himself to be "an old-fashioned guy," and he said he has always held education in high esteem. He does not believe that the job of an educator is to entertain. He said, "Education is hard work and the joy and the reward comes in the work and in being excited about ideas and about learning things." Mr. Lightwood, does, however, understand that many of his students come from backgrounds where "literacy is not particularly valued or practiced." And, he empathizes with older people and people who have been displaced and are trying to build new careers. He sees his role as that of dispersing information and helping people do better work, more efficient work, and to produce a better final product.

When asked how he felt about online teaching and learning, Mr. Lightwood said that there is no substitute for a "vibrant, real classroom" when you have a "really good, well-informed teacher who is able to give you good information." He also thinks online

classes are not for everyone. He said, "They are probably for a relatively small percentage of the college population because it does take a maturity and discipline to get it done." In our second conversation, he added that seated classes have an advantage because a well-informed and charismatic teacher can really bring enthusiasm to a class, a point also mentioned by Mrs. Maylie, and that being in class with articulate students is also enlightening. In these two respects, he believes seated courses are superior to online ones, but he also said the intellectual demands of an online class, those of understanding and reading the material, are just as demanding and challenging as those posed by a seated course. Mrs. Wickfield stated similar beliefs on the potential for online courses to be challenging in content and rigor. Mr. Lightwood's students are required to write research papers and annotated bibliographies, to critically analyze essays, to read selected works, to conduct library and Internet research, and to learn and utilize many literary terms in their writing. For example, one of Mr. Lightwood's assignments requires students to read three selected essays in the text, to examine the common themes in the three essays, and to integrate these themes with their own personal feelings and beliefs in a well-written essay. Students also use online glossaries, and they are provided with links to newspapers, magazines, and other publications.

Mr. Lightwood recognizes the value of student interaction in a seated course. He believes that students can learn from meaningful discussions with "articulate" students. However, he chooses not to incorporate this component into his online courses. Students interact with him via e-mail, via the telephone, and he gives extensive written feedback on their papers, but he does not build student collaboration/interaction into his online

courses. He does not use discussion threads, for example. The reason he does not include the interaction component is because he strongly believes a teacher should not assign anything that he or she cannot monitor and grade, and he does not have the time to read numerous responses on discussion threads. He realizes that the lack of interaction among students may lead to feelings of isolation, but it would be inconvenient to monitor it. He also noted that students with family and job demands would find an added interaction requirement inconvenient also. Mr. Lightwood and Mr. Dawkins are the only two participants who do not permit student interaction. However, it is important to note that their reasons for not including student interaction differ. Mr. Dawkins views student interaction as counterproductive to the integrity of his courses, while Mr. Lightwood eliminates student interaction because of time constraints. He believes his time is better spent in providing detailed feedback on individual papers. In a follow-up phone call, Mr. Lightwood added that for his type of course, the bottom line is that the student read and study the material, and that his students must learn to write well, and that these are things they do individually, making the interaction component unnecessary.

Mr. Lightwood believes benefits of online learning include the flexibility afforded to the student and the fact that an online course can be very challenging academically. One personal benefit to him is that the online venue suits his individual personality better. He noted, "I tend to be irritable, and I have a certain lack of self-control. So, working with the computer and the Internet as a buffer, first of all, I am able to consider before I make a response to someone what the appropriate response should be." He also likes the opportunity to reflect upon students' questions and to refine his answers before he

responds. While Mrs. Maylie believes her personality is better suited to the seated classroom, Mr. Lightwood believes his personality is better suited to online teaching.

As far as negative aspects of online teaching and learning, Mr. Lightwood identified the students' feelings of isolation as a potential negative aspect. He also noted several times that online courses are not suited to all learners. As far as the teaching aspect, he mentioned that hours at the computer can stress the body, noting that he works on the computer from 7:30 to 11:00 A.M. each day, and then seeks some form of physical exercise. He has a sciatic nerve condition which is irritated by hours of sitting at the computer. He also discussed problems that he experienced with Blackboard software, problems that ultimately led to his creating his own platform for his online courses. He found Blackboard to be too labor-intensive, and after he decided to omit the discussion forums, he felt he really had no reason to continue using it. He explained that Blackboard has many features, but each course and assignment must be entered on a separate page under a separate item in the syllabus. By using his own website for the courses, he is able to create one document which requires the students to scroll down to find all information instead of clicking numerous buttons. A review of his online courses on his website confirmed that he is able to cut down on the amount of navigating that students are required to do by posting all of the documents into one place. His website demonstrates that Blackboard software is not needed in order to provide a rigorous and meaningful content; he posts announcements, links to external sites and documents, and explicit descriptions of his expectations and recommended approaches for all assignments. He requires a great deal of online and library research, and students must

complete a variety of reading and writing assignments on a weekly basis. Writing assignments include critical analyses of essays read in class, narrative writing, descriptive writing, and expository writing. Students are also required to complete assignments that deal with the organization aspects of writing, such as how to structure introductions and conclusions. Mr. Lightwood's approach to teaching is practical in nature, as his website use reflects.

Mr. Lightwood also experiences problems with dial-up connections. He said his main problem is he has a slow download from the server, and some times it takes him a great deal of time to get through the amount of e-mail that he has to read each morning. He said, "I suffer more from the problem of a slow connection than my students do." He noted that it takes time to download the students' work, and he is also frustrated by junk e-mails that are sent to the college. He said that some college administrators do not understand that e-mails with graphics and other large files take forever to download.

Mr. Lightwood also feels the preparation for teaching online is much greater than the preparation for teaching a seated course. He said the mechanics of putting up an online course take a great deal of time, and the ancillary materials that he creates and posts also take a great deal of time to create and update. A documentation review confirmed the presence of an extensive glossary of literary terms created by the instructor; he constantly updates this glossary. Links to publications, papers, magazines, and newspapers are also provided. He said, "It's labor intensive. For example, last summer, I spent from the end of classes in May, I did something in preparation for fall

every day up until the beginning of July." Mrs. Wickfield also stressed the increased preparation, as did Mr. Harmon.

As far as they type of person who succeeds in an online course, Mr. Lightwood said the typical online student needs to be mature, self-disciplined, independent, and resourceful. He must also value flexibility. He said, "I definitely think online classes are not for everyone. They are probably for a relatively small percentage of the college population." He added that what happens in an online course may merely reflect earlier patterns of behavior. Mrs. Maylie also alluded to this idea when she said, "they are already pretty smart to begin with." People who have been successful and who are good students to begin with, will also be good students in the online course. If people are responsible and meet deadlines, they should succeed online, whereas "People who tend to put things off, who seem to be irresponsible, who are always a day late and a dollar short—they generally don't do well at all." He also added that his classes require a great deal of reading and writing, and that the student must be willing to do the background work and preparation. All of the participants in this study reported an increase in the amount of required reading and writing for online students.

Finally, Mr. Lightwood believes there is no substitute for a good seated class with a well-informed, enthusiastic teacher. However, he was one of the first people on his campus to teach online, and today, he prefers to teach all of his classes via the Internet. The medium fits his personality and suits his needs. He believes that online teaching requires more work on the part of the teacher, and that not all learners are suited to learning online, but he recognizes that online learning does work for the mature, flexible,

and self-disciplined student. Mr. Tapley and Mr. Lightwood both enjoy the flexibility that teaching online affords them.

## Summation of Key Points

While Mr. Lightwood believes that there is no substitute for a good seated class, he believes that an online course can be as equally demanding intellectually as a seated course, and he prefers teaching online because of the flexibility that it affords him and because his personality is better suited to the online medium. He believes online courses are not for everyone; in fact, he believes that only a small portion of the population is suited to online learning.

Mr. Lightwood recognizes the potential value of interaction among students, but he does not include that component in his online courses because of time-constraints on him and his students and because he really does not believe interaction and collaboration are needed for the student to learn. In spite of the fact that Mr. Lightwood does not incorporate student interaction and collaboration into his courses and does not use a great deal of technology, his courses still demonstrate some of the tenets of constructivism. For example, he uses models of sample papers, external links to additional resources such as glossaries, newspapers, and magazines, online research, and his assignments require a great deal of reflection upon the part of the student.

Another interesting difference in Mr. Lightwood's approach is that he prefers to use his own websites instead of the Blackboard platform, and he has spent a great deal of time simplifying his document layouts and developing ancillary materials for his Internet courses. He found Blackboard to be labor intensive, and he circumvents this problem by

using his own Internet site. A review of other instructors' Blackboard courses confirmed what Mr. Lightwood said about the labor intensity involved with Blackboard. There were many buttons to click to find the various materials and links, and the slow speed of downloading quizzes and tests from Blackboard that dial-up posed made this experience painfully long and annoying for the researcher. Mr. Lightwood's courses were much easier and faster to navigate.

## Joe Nemo

Mr. Joe Nemo is a novice online instructor in the social sciences who is currently in his first year of teaching online. He teaches two online classes with a total of 25 students. He also teaches seated versions of the same classes. Mr. Nemo believes a teacher's role is to teach students how to think and to help the students in any way he can. He said he is a "facilitator and a tour guide." He directs students to the work, and it is their responsibility to complete the work. He believes content taught in class should be related to real life, and he also believes that students learn in different ways—some by seeing and some by doing, making it important to present material in different ways.

When asked what he thought of online teaching and learning, he said, "Give me a classroom setting any day versus online." He said he has concerns that students are not fully comprehending the material. His concerns stem from his evaluation of their comments on discussion threads. He noted, "Looking at some of the responses, many of the responses I am getting from the discussion board, either they're responding without having read the chapter, they're not fully digesting it, they're not getting it." Though he prefers the seated classroom, he still teaches online. He said when he was hired by the

college, one of the job expectations was that he would teach his particular subject online. Mr. Harmon also mentioned feeling that there was an administration driven rush to get classes online.

Mr. Nemo interacts with his students via e-mail, telephone, and discussion threads. Students are also encouraged to see him during office hours, and he invites the online students to attend the seated version of their class. He utilizes weekly discussion threads to promote interaction among students in the online class. Students are required to respond to 10 of 16 weekly discussion threads throughout the semester. An observation of his online course confirmed the presence of the discussion threads. Each thread ranged in number of responses from 8 to 36. A typical thread asked the students to consider and respond to the material presented in the text related to supply and demand issues and current oil prices. He is also in the process of adding a library component in which students will be required to visit the library and interact with librarians and other resource people. Students are also required to collaborate with each other on class projects, and they use discussion threads to discuss and work on these projects. Mr. Nemo did note that student interaction does vary from semester to semester, and that this semester, students are responding to his threads, but they are not responding to each other as much as he would like. He also noted that students still do not get as much one-on-one interaction as they would in a seated course.

Mr. Nemo identified one benefit of online course offerings as the opportunity to teach courses that otherwise would not make due to low enrollment numbers, resulting in the opportunity to teach more. Mrs. Maylie, Mr. Lightwood, and Mrs. Wickfield also

mentioned the benefit of being able to teach more courses or courses that would not make if offered in the seated capacity. By more, Mr. Nemo means the chance to teach additional classes and larger numbers of students. Also, classroom space is not required to run an online class. Mrs. Wickfield also pointed out this practical benefit. He does not view online teaching as giving him any personal benefits because he said the flexibility is offset by the increased preparation required to teach online. Mrs. Wickfield also stressed that the increased teacher preparation outweighed the potential benefits for the instructor. As far as benefits for the students, they have flexibility that they would not have in a seated course. He noted that online courses offer excellent opportunities for people who need flexibility and who can learn by reading. He added that people who can learn by reading may get more out of a class intellectually because online courses force the students to read and study more than they would if they were taking the seated version of the class. Mrs. Wickfield and Mr. Dawkins also mentioned the benefit of increased reading on the part of the student. He feels that the increase in required reading can lead to the content being richer for the student.

Mr. Nemo also identified many negative aspects of online teaching and learning. He noted that dial-up Internet connections are slow, and they interfere with his use of technology. He does not use videos and simulations as much as he would prefer because he and many of his students are limited by dial-up Internet connections. He added when he is at home, "If I get a rainstorm, I have no Internet connection." He said the slow speed and other problems with the Internet infrastructure make video-conferencing and

other forms of advanced technology unrealistic at this point. Mr. Harmon, Mr.Tapley, Mrs Wickfield, and Mr. Lightwood also indicated that dial-up limitations are a problem.

Another problem that Mr. Nemo has encountered is that some times online course offerings compete with seated course offerings. This competition can result in a seated class not being able to make. Mrs. Maylie also mentioned this problem. According to Mr. Nemo, the consequence of this occurrence is that a person who prefers not to take the class online and the person who is not well-suited to online learning, may be forced to take it online because it is no longer offered in a seated capacity. He added that the administration needs to work out a rotational system for online course offerings to ensure that seated classes can still make. He said a year can pass without having a particular course offered in a seated capacity.

In both interview sessions, Mr. Nemo also talked at great length about integrity issues with online courses. He cited problems with students' plagiarizing from Internet websites as a result of the ease of "cutting and pasting" information from websites. He favors requiring students to attend campuses several times a semester in order to combat this problem. Still, Mr. Nemo said, "Cheating isn't happening more online, in my online classes, than I can tell, than it is in [seated] classes, but to prevent the cheating for the online class is going to end up taking away a little bit from the online class in the fact that I think that some of the work is going to be not online and force them to come to campus or something."

Another detriment that he discussed was isolation. Students may feel alienated from other students because they do not see them as those students who meet regularly in

seated classes see each other. When observing Mr. Nemo's online class, the researcher found that the instructor recommended that students form Virtual Study Groups to help eliminate feelings of isolation. He added that the online students have not formed the virtual groups yet. He also said it is hard to build rapport with students online, noting that he may be joking, but the tone is lost, and the student interprets the remark as an insult. Mr. Tapley also found problems with humor being lost or misinterpreted in the online setting. He also added that many students are "too young" and "too occupied" to succeed in an online setting. He is also bothered by "the online classes appeal best to the people that will be the least successful." He expressed concerns that if the reason a student is taking an online course is so that he does not have to show up on campus, that reason may indicate that he lacks the discipline to complete the work. He identified the appeal to the weak student as the biggest negative aspect of online learning. Mrs. Flemming, Mrs. Maylie, and Mr. Tapley all discussed problems with under-prepared students in online courses.

As mentioned earlier in the conversation, Mr. Nemo said the preparation for teaching online is different from the preparation for teaching a seated course. He said he spends more time grading and more time going through discussion board comments. He uses a supplementary cartridge provided by Blackboard to build tests and quizzes. He noted that he has more flexibility in the summer because he can do the work from home, but during the school year, teaching online has not saved him any time. He said he spends a great deal of time working on the online classes. Mr. Lightwood and Mrs. Wickfield also report spending a great deal of time preparing for and managing an online class. Mr

Nemo concluded, "I have spent more time working with my one or two online classes this semester than I have for all of my seated classes pretty much put together."

Finally, in spite of Mr. Nemo's view that the online course tends to appeal to the weaker students, he does believe that there are students who can do well online. He said those students who have enough free time to do the work can succeed. They must also be self-disciplined and responsible, and he repeatedly emphasized that they must be able to learn by reading. He said, "Those people that can learn by reading, an online class is a wonderful thing." But, he added that "Unfortunately, a lot of the online stuff has them reading stuff off the screens, reading stuff out of the textbook, and more people learn by seeing, learn by doing, learn that way."

## Summation of Key Points

Mr. Nemo feels seated courses are superior to online courses for many reasons, and he has concerns with integrity in online courses, problems with the Internet infrastructure and connection speeds, and concerns about online courses competing with seated course offerings. He recognizes that some students do well in online courses, but he strongly believes that the willingness and the ability to read are the keys to success in the online setting. Though he did not directly state it as did Mrs. Maylie and Mr. Lightwood, Mr. Nemo implied that the online course may be suited to a small segment of the community college population only, not for the general population. He said, "25% of them, yeah, they have it. The other 75%, honestly, I'm not sure."

Furthermore, Mr. Nemo also recognizes the value of interaction, and he promotes interaction by requiring students to participate in threaded discussions. Still, he finds that

the amount of interaction in his online courses varies from semester to semester and course to course. He encourages additional interaction by inviting students to form virtual study groups and by inviting them to attend the seated counterparts of their online classes. To date, his online students have not interacted in the study groups, and they have not attended the seated classes. Mr. Nemo uses the discussion board as a place for his students to interact with him and with each other and as a place for students to reflect upon the material they are reading and studying in class. He also utilizes real-life examples to make the course content relative to his students. The learning environment that he helps create through the use of discussion threads, opportunities for reflection, and the use of real-life examples demonstrate the presence of constructivist learning principles.

Mr. Nemo would like to use more advanced technology in his online classes, but he finds that the poor Internet infrastructure in the service area and at his own home, make the use of additional technology prohibitive. He spoke of possibly using simulations, but of the technology, he added, "It's an ongoing thing. It's just going to be tackling a new part of the multimedia experience each year. Right now, it's a single media experience." Because Mr. Nemo's use of technology has been limited by dial-up access problems, constructivist learning, though on the horizon, has not been totally achieved. Discussion threads and assignments do provide opportunities for students to interact with each other and with the teacher, but additional technology such as simulations and virtual study groups may eventually help create a more solid constructivist learning environment.

Lastly, Mr. Nemo differs from the other participants in this study in that he is just beginning to teach in an online setting. His views on issues such as integrity differ from the views of the other participants. He does not prefer teaching online, and he does not really believe it is the best option for the majority of his students; however, like Mr. Dawkins, he realizes that he is expected to embrace this mode of teaching and learning, so he makes the best of it. He recognizes that online teaching and learning are constantly evolving, and like Mr. Harmon, he shows an interest in constantly trying to improve the online experience for his students.

## Ada Carstone

Mrs. Carstone has been teaching for over twenty years in business science and technology, with the last eight of those years in the state community college system. This semester she taught four seated courses with a total enrollment of 90 students, and three online courses with a total enrollment of 64 students. Mrs. Carstone teaches online courses for two community colleges, one urban and one rural. The most recent online course that she taught for the rural community college in this research study had an enrollment of 15 students. Mrs. Carstone believes everyone can learn. She believes that students learn best when they are actively involved in the material, when they use their personal experiences, and when they connect the course content to their private lives. She is cognizant of constructivist learning theory and incorporates constructivist principles into her online courses. The class observation and documentation review included a link to a 1998 speech on constructivist learning. The article emphasized active

as opposed to passive learning. She also requires interaction on discussion threads and in group projects. She utilizes simulations such as *Camtasia*, one that involves mimicking key strokes and that allows the teacher to narrate to her students. She requires online research on a weekly basis, and she allows students to select their own research topics. She requires students to use files such as those found in Microsoft Office to create projects related directly to technology in their areas of instruction. They also create personal webpages. She is also willing to learn and to try new things, and she is willing to adjust and make changes to the way she teaches. She views herself as a planner, a facilitator, a provider of feedback, and a guide. She said, "I am just a shepherd." The class assignments, discussion threads, and projects are constructivist in nature. The learning is student-centered; opportunities for reflection are abundant, and personal experiences are incorporated into threads and projects.

Mrs. Carstone also incorporates a great deal of interaction into her online classes, both between her and her students and among students in the class. She interacts with her students via e-mail, telephone, and Blackboard discussion threads. She also posts virtual office hours when she is available to work with students live on Yahoo Messenger. She believes in rapid feedback and attempts to answer all e-mails within 12 to 24 hours. Friendliness is her strong suit, and she uses that trait to build rapport. She also posts introductory messages that include some personal information in order to promote rapport and foster interaction. Students are expected to collaborate on projects and assignments and to provide feedback to each other; she is a firm believer is cooperative

learning. The observation of the online course and the syllabus confirmed the existence of the contact information, the discussion threads, and project requirements.

Mrs. Carstone feels there are many teaching and learning benefits involved with online courses. She said for some students, online learning can be "pretty liberating." and she adds that "It is liberating for students to see how their own past/current experience is relevant to what they are learning. Otherwise, students may struggle with connecting to something that is new. It's my job to facilitate the student in making a connection between experiences they've had and the new content they are now experiencing." Other participants did not speak of online learning as being liberating, though Mr. Tapley did talk of finding really good, motivated students online. Mrs. Carstone said, "They get the opportunity to think about material and reflect on it, which I think is really important, and come back and visit the material, which you don't get to do in a seated class." She further explained that the online course set up allows the student to stay continuously connected to the material. She views the opportunity to reflect as a major benefit of online learning. One opportunity for reflection required students to read a chapter about censorship and to reflect upon and post a response to the following: *Should material that might be deemed inappropriate for certain groups (minors, for example) be banned entirely from the Web, even if it is acceptable for adults? Does this not infringe upon the rights of those adults who wish to view this type of material?* Carstone added, "I think the week-long discussion threads are the students' best opportunity for reflection. By requiring a post of sufficient length, and replies to at least two students, they gain much in the realm of reflection each week." This example also

demonstrates how Carstone was able to use the discussion board to promote authentic student learning.

Other benefits for students include the option of learning at their own paces, and she noted that this aspect is extremely valuable to working students and those who have families. She pointed out that some people, after working all day, do not want to go to night school. The online option allows them the chance to learn from home. She also thinks it is possible to "pack in more material" online than in a seated course. Another benefit she mentioned is that online learning requires students to use computers more productively. She also added that students who would never speak out in class can go on the discussion board and freely share their ideas, a point also mentioned by Mr. Tapley. She noted that the discussion threads are just as good, or even better, than discussions in the seated classroom because it's easier to keep students focused online.

As to instructor benefits, Mrs. Carstone noted that online teaching affords her flexibility also. She gets the same flexibility that her students get and can work on the classes when it fits her schedule. She also believes that online teaching offers her the opportunity to be more creative. She said she has to think differently about the material and how it would be perceived by a person who has to understand it from reading it on his own, and this fact forces her to be more creative and resourceful. She said, "I think it makes me a little more creative. I think differently about the material cause when I'm looking at the chapter, I might picture the class and online at the same time. I sort of have to think about the material and how it is going to play with students who are reading it on their own."

In spite of the fact that she loves to teach online and has considered teaching totally online, Mrs. Carstone also recognizes that there are some negative aspects to online learning. She believes that frustration with the technology and feelings of isolation on the part of the student are the biggest problems with online learning. Mrs. Carstone provides many opportunities for interaction in her online courses, but she does find that some students feel isolated from others, and she said she would not want someone to take all of his classes online, pointing out that seated classes are different, and college students do need to take some seated classes in order to gain the full college experience. The potential for students to feel isolated is recognized in some fashion by every participant in the study.

Other negative aspects include a high attrition rate. She noted that students some times enter online classes with the perception that they will be easier, also noted by Mrs. Maylie, and then by the time they realize the course is not less demanding than a seated one, they have missed the add/drop date for the course. She said students often do not realize the self-discipline involved in learning online, and they discover too late, that they are not suited to online learning. She adds, "They fail to understand the very significant discipline that is required to deal with a class online and that it requires more attention than, say, a seated class, in some respects. The whole time-based thing."

There are also negative aspects for the instructor. Mrs. Carstone said one disadvantage is that is it hard to balance teaching online with teaching seated courses. She said an instructor's role changes from the online to the seated, and the teacher has to remember to "switch gears." She spoke of changing from being a lecturer to a facilitator.

She said seated students often expect a lecture, whereas the online student may be expecting something entirely different. By different, Mrs. Carstone means, "I was referring to their experiences in other online classes or just the expectation that doing the work online will be easier. A number of online courses may require a few papers and that's all; or they may quiz every week, and that's all." She says she takes a more interactive approach in her courses, one that is "much more multi-faceted." She said this role switching can be both challenging and frustrating. Other participants spoke of role changes from teaching in the seated classroom to teaching in the online classroom. Mr. Tapley mentioned that his role online was manager and that online teaching was contractual, whereas his role as a teacher in a seated course is that of content expert. Mr. Nemo mentioned being a tour guide in the online class. She also said it is very easy to get bogged down with the work and feedback requirements as the semester progresses, and teachers too can some times procrastinate and fall behind on grading. Mr. Lightwood also mentioned that it takes a great deal of time to grade and provide feedback on the students' work.

Mrs. Carstone also noted that the online course requires a great deal of preparation on the part of the teacher. She said an online course requires her to have the entire semester laid out before the course actually starts because students need to know exact expectations from the beginning. Another participant, Mrs. Flemming, also mentioned the need to have the entire course laid out prior to the start of it. Like Flemming, Carstone said she has to do much more advanced preparation and much more research in order to prepare for an online course. She also said that she spends so much

time creating rich, in-depth questions for her discussion threads that she also uses them for discussions in her seated classroom. When observing her online course, the researcher found 15 discussion threads, and the number or responses on each ranged from 28 to 44. One discussion topic dealt with cooperative learning. Mrs. Carstone posted the following:

> Cooperative Learning and Learning Styles-In the Course Documents area is a list of links for this subject. You are encouraged to find your own web resources as well. This This is a more open forum, you have several options for areas to discuss. Please respond to at least two classmates.
>
> 1. What cooperative learning provides for students with a variety of learning styles.
> 2. An example of a cooperative learning activity for a subject area you enjoy. Please include citation if you found your idea elsewhere.
> 3. Results of your own Learning Style inventory test. Discuss how you see this affecting the way you have learned in the past and the present.

Mrs. Carstone believes that in order to succeed in an online course, students must be actively engaged and willing to take responsibility for their own learning. She feels students are the ones who have to sustain themselves in the course. They must possess a significant amount of self-discipline. They also need technology skills, and like Mrs. Wickfield, Mrs. Carstone builds in assignments early in the semester to ensure that

students have the basics such as the ability to navigate Blackboard and send an e-mail. The course observation confirmed that students are required to use Microsoft Office files such as Excel, Word, and FileZilla. They also need time management skills. Students have to be able to meet due dates. Students also must take the initiative to communicate with the instructor when problems arise.

Mrs. Carstone enjoys teaching online. She enjoys the flexibility, the opportunity to try new things, and the chance for creativity. She recognizes the benefits and the aspects both for her students and for herself. Online learning presents many challenges for the learner and the instructor. In our follow-up interview, she said something that gave this researcher a new perspective on teaching online. She said, "The quality probably really shouldn't be gauged on necessarily on what I always do but on what is best for the students." She explained that she could have a wonderful online course, but if the student were not ready to learn online, then the quality would not be good for that particular student. Mr. Tapley expressed a similar idea when he said that some people get very much out of his online courses, and others do not get as much.

Mrs. Carstone is cognizant of adult learning theory, and she approaches the online classroom through a constructivist framework. She utilizes technology such as discussion threads, online research, and simulations to promote constructivist learning principles; she makes the learner the center of the course, and she provides opportunities for students to draw upon their own experiences and interests and to incorporate these interests into their projects and assignments. Students also interact and reflect regularly. While Mrs. Carstone provides strict deadlines and rapid and regular feedback, the student is

responsible for his own learning. The experience may indeed be "liberating" for the student who wants to draw on his own experiences and construct his own reality.

## Summation of Key Points

Mrs. Carstone differs from the other participants in that she approaches online teaching through a theoretical framework; she employs constructivist learning principles in her online courses. In her online classes, Mrs. Carstone truly creates a learning environment in which students may construct their own realities. They are very much in charge of their own learning, and while the course has requirements and deadlines, students do have a great deal of choice as far as how and what they research. Opportunities to reflect abound, and interaction is a regular occurrence.

She values the flexibility that the online course offers her and her students. She also believes interaction, both between her and her students and among students in the class, is very important in the online course, and she provides many opportunities for interaction through discussion threads, group projects, and e-mail. Mrs. Carstone also feels the preparation involved in teaching online is extensive, but that the experience can enable the teacher to be more creative in her instruction. She indicated that whether or not a student benefits from the online class may depend on the student's suitability to learning online. She admits that students are sometimes frustrated with technology, and they do experience feelings of isolation, but she still believes online teaching and learning can be a meaningful and beneficial experience both for the instructor and for the student. Mrs. Carstone recognizes both pros and cons of teaching and learning online, but overall, her feelings about online teaching and learning are positive.

## Patterns in the Data and Disconfirming Evidence

During the ongoing analysis of all of the data involved in this study, key patterns emerged early in the process, and many of those patterns eventually evolved into important themes that aided the researcher in answering the study's research questions. Disconfirming evidence was also present. The following table captures many of these patterns.

Table 2: Summary of Advantages and Disadvantages of Online Teaching

| Advantages | Number | Disadvantages | Number |
|---|---|---|---|
| Better organization on teacher's part | 4 | Isolation, lack of face-to-face contact | 7 |
| Increased opportunity for rich interaction | 4 | Integrity concerns | 2 |
| Technology use-productive (student benefit) | 4 | Internet infrastructure (connectivity problems) | 6 |
| Student accountable for his/her learning | 1 | Competition with seated courses | 2 |
| Time management skills (students develop online) | 4 | Teacher better-suited to traditional course | 1 |
| Research, writing, and computer skills (students develop online) | 4 | Student readiness issues | 7 |
| Better/Good quality of students found online | 2 | Technology issues-students' lack of technology skills | 2 |
| Professional development/growth opportunities | 2 | Increased preparation time | 7 |
| Flexibility | 7 | | |

One pattern that emerged in the research process is that no instructor believes that the online course is superior to the seated, traditional course. Feelings about teaching online varied from instructor to instructor, but everyone agreed that the face-to-face contact afforded by a seated course is superior to learning online. However, in the second round of interviews, a contradictory pattern emerged. Several instructors noted

that the content and rigor of an online course can be equal to or superior to that of a seated course. Whether or not the content and rigor is better than a seated course depends on the instructor's preparation.

A second pattern that emerged is that the instructors agree that in order for a student to succeed in the online classroom, he must possess certain characteristics and traits. These characteristics and traits include maturity, accountability, responsibility, self-discipline, flexibility, time management skills, self-directedness, initiative, problem-solving skills, reading comprehension skills, and basic technology skills. The necessity of being able and willing to read, and the ability to learn by reading were emphasized by every person in the study. None of the data disconfirmed this pattern.

A third pattern concerns the benefits to the students. The benefits, both practical and learning, for the student of an online class are numerous. The practical benefits include the flexibility and convenience of being able to work on a course and/or degree when one has time available to do so. This flexibility helps students with demands such as those involved with childcare, family obligations, and work schedules. Not having to attend class can also help the financially strapped student avoid high gas prices. An important point emerged in reference to this benefit. Several instructors indicated that classes do have strict deadlines and many discussion threads and assignments are due on a weekly basis. Thus, the student is flexible as far as when he does the work, but he still has to meet concrete deadlines.

Learning benefits are also numerous. Instructors feel that their students are forced to read more, to write more and better, to learn more on their own, and to become

problem-solvers. They also believe students develop good technology skills, and they learn time management and self-discipline skills. Discussion threads and online assignments offer students opportunities to reflect on the material and to revisit it more so than they would in the seated course. The content of an online course can be equal to a seated course, and in some cases, better. Also, students who do not participate openly in a seated class may feel less inhibited on the discussion board.

Benefits to the teacher of the online course are not as numerous as those to the students, but some benefits do exist. One benefit is the flexibility and freedom from certain time constraints. For example, a teacher is free to work on the online material on his own time and his own schedule just as the student is. He may teach a class from anywhere that he finds an Internet connection. There are also professional benefits for the instructors. Instructors learn to change roles when they teach an online course; many move from lecturer and content expert to facilitator and manager roles. Many become more creative in the ways they present their material and in circumventing technology problems. Several of the participants believed that their online courses are more structured and better organized than their seated courses.

Just as there are benefits for the students and the instructors, there are also detriments for each. The participants cited many detriments for students. The most frequently cited detriment came as no surprise because the literature review mentioned it also. Isolation can be a detriment to online courses. Students may feel isolated and alienated because of the absence of face-to-face contact. The isolation issue needs clarifying, however. Seven of the nine participants build in many discussion board and

opportunities to work with others, and Blackboard provides tools that allow online collaboration. The degree to which a student feels isolated may hinge upon how many opportunities for interaction that an instructor builds into his or her class. As far as isolation from the instructor, every instructor provides e-mail addresses, phone numbers, office hours and appointment times, and some even invite students to attend the seated courses. Also, instructors reported that they follow up by e-mail or phone if students do not contact them regularly. If a student feels isolated from his instructor, the problem may be that the student is not taking advantage of the instructor's accessibility. It is also possible that the isolation issue may go beyond the presence or lack of interaction. Some feelings of isolation may come with the territory; isolation may be a trade-off for the convenience and access provided by online course offerings.

Another significant detriment, and this particular one is unique to the rural setting, involves the limitations that the dial-up Internet access in rural areas places upon students and instructors. Instructors complain of slow download times, and they also explained how the dial-up connections that many of their students have in the rural service area prohibit them from using additional technology. Most of the instructors do not use a great deal of videos, recorded presentations, simulations, models, or any type of large file that would require someone on dial-up a great deal of time to download. In fact, the very slow connection speed offered by dial-up can make something as simple as navigating Blackboard to obtain a daily announcement a very tedious task. The Internet infrastructure in rural areas poses serious problems for online learning and teaching.

As to the problems posed for dial-up Internet access in rural areas, seven of the nine participants felt dial-up posed major problems. Two participants did, however, say that they had experienced no problems with dial-ups. However, one participant had less than five students and they also take courses on campus; hence they may be using school computers. Also, the instructor said she does not use a great deal of technology in the Blackboard course. The class observation confirmed that there were no huge files to download. The second person who said there were no dial-up issues is a special case. Unlike the other participants in the study, the bulk of his students are not from the rural service area. This instructor teaches many transfer students who take his particular course to transfer the credit to a four year university. Most of these students live in urban areas, and they would not be plagued by dial-up issues. This instructor also does not use a great deal of technology. He uses the Blackboard program to posts online quizzes, assignments, and announcements, but he does not utilize PowerPoint presentations, videos, or any large files that would prove excessively slow to download on a dial-up connection. Also, one instructor is currently utilizing *Breeze* technology to alleviate the download problems caused by dial-up Internet connections, and three other instructors expressed an interest in investigating and incorporating *Breeze* into their online class in order to free them to use more advanced technology. These instructors expressed optimism about *Breeze's* potential to solve the dial-up issue.

Another pattern found in discussing the detriments is that several instructors believe their students lack the academic, and in some cases, the technological, foundation to benefit from the online learning experience. Instructors complained of a lack of basic

reading comprehension skills and of students who are academically under-prepared to learn online. The lack of time management skills was also an issue. One of the participants felt the lack of academic preparedness was specific to the rural area.

But, another contradiction the researcher discovered from the first round to the second round of interviews deals with the instructors' perceptions about the students' technology skills. In the first round of interviews, only one person said a lack of basic technology skills was a problem. In fact, many said it's no longer a problem as it was ten, five, or even two years ago, that now everyone is technologically "savvy." However, the researcher believes technology deficiencies may be a bigger problem than the instructors realize. First, Mr. Tapley vehemently expressed concerns over lack of technology skills, and he cited examples of students who could not send an e-mail attachment as late as the last week in the semester. This one participant's concern caught the researcher's attention because he appeared frustrated with this problem. He also confirmed the problem in the second interview.

Then, the researcher found that several of the instructors posted forums for students to help each other with technology problems. Several instructors also mentioned the tasks that they built into their classes in order to ensure that their students can navigate their sites, send e-mails, etc. during the first few weeks of class. Another person who has claimed that technology deficiencies were no longer a problem, in the second interview, said that "those people" drop out of the class. Other instructors also spoke of attrition rates. The cause of attrition rates were not explored in this study, but the researcher believes one should consider the fact that the students' with inadequate

technology skills may be among those who drop the online courses. Hence, this would explain why most of the participants feel technology skills are not an issue—they may not be with the ones who remain the course, but what about the ones who drop out?

There are also detriments for the online instructor. The single most negative aspect of the instructor of an online course is the increased preparation time it takes to design, maintain, and monitor an online course. Instructors feel that the online course has to be laid out in its entirety before the class starts. Instructors also spend a great deal of time providing feedback and handling technical problems. Several instructors felt that the increased time it takes to teach online offsets any benefit that they may receive from teaching online. In some cases, the amount of time required of the teacher nullified the flexibility benefit. Also, instructors mentioned flexibility as far as when they teach, grade, or prepare, but two instructors maintained that the increased preparation time required of them cancelled the flexibility benefit. Also, six participants said the preparation time was a great deal more than that required to teach a seated course; one said the time was equal; two said the preparation time was less. However, the two who said it was less do not use a great deal of technology, and their classes have been established for a long time.

Other detriments mentioned were the potential for online courses to drain students from seated populations. Instructors cited incidents of their seated courses not making, forcing them and their students, who may not have preferred to teach or learn online, to do so simply because the online option was the only one left.

The instructors also talked of the difficulty of establishing rapport, conveying enthusiasm, and the general loss of the benefit of knowing the teacher face-to-face. Instructors also complained of the additional time required for technical details like giving detailed written directions and repeatedly answering the same question online—when in class, the instructor could have explained something once for the entire class. Technical problems such as these lead to frustration on the instructor's part.

Another pattern involved interaction. Interaction between the instructors and the students, and interaction among students, in the online courses varied from class to class, instructor to instructor, and semester to semester. Faculty and students interact primarily through e-mail, with the discussion boards coming in second. Instructors are also very accessible through the phone, and all are open to scheduled office visits. Still, e-mail remains the primary form of student and teacher interaction.

Students in online courses interact primarily through discussion board forums, though in some cases, students are able to meet outside of class because the setting is small and they already know each other from other courses. Several teachers also require group projects in which students interact online to complete projects and assignments. Eight of the nine participants value student interaction, while seven of the nine actually require student interaction in their online courses. No disconfirming evidence arose concerning this finding.

Also, integrity issues were only mentioned by two participants. One participant, Mr. Nemo, noted that he has been forced to deal with integrity issues, and that the "cut and paste" option makes plagiarizing from Internet sites very easy. He is so bothered by

the online cheating that he has witnessed, that he is considering requiring students to attend class several times a semester. Mrs. Wickfield mentioned cheating and the fact that it is possible not to know who is on the other end doing the work, but she admitted that if a person wants to cheat, he will cheat, even in a seated class.

On the other hand, Mr. Dawkins enthusiastically defended the integrity of online classes, and said that his online grades tend to be lower than seated grades, and that if people were cheating, their grades should be higher. He also said that the complaints about integrity issues come from people who do not want to teach online, and that as far as the uncertainty about how is doing work, one cannot prove who is doing the homework in a seated course either.

Even though the integrity issue did not develop into a major theme in this particular study, faculty concerns with integrity are cited in the literature, and three of the nine participants did mention it. The participants' views on integrity in online classes conflict.

Finally, in relation to the theoretical framework of this study, and though only one instructor openly discussed constructivist learning theory, the class observations and follow up interviews did indicate the presence of some constructivist learning principles in most of the classes. As described in the literature review, constructivism assumes that learners are active, not passive, that one's knowledge comes from interpretation and processing of what is received through the senses, and that the learner is the center of knowledge. The instructor is considered a facilitator or mediator, and the major emphasis tends to be on situated or contextual learning. Cooperation and collaboration are also

important to constructivism, and the learners are given control of their learning process (Ally, 2004). Also, the criteria suggested in the *Technology Use Taxonomy* (North Central Regional Educational Laboratory, 2004) demonstrate how an instructor's use of technology may be conducive to constructivist learning principles. According to this evaluation plan, simulations, online research, and expression and visualization are used to create authentic learning experiences in real world contexts in the constructivist learning environment. The discussion threads and assignments, for example, did include models, links to outside resource people and sites, opportunities to reflect, opportunities for students to pursue their interests, opportunities to discuss real-life experiences, and in some cases, simulations were used. In many classes, students were required to be actively engaged in the learning process. The follow up interviews also indicated that the dial-up problems may be hampering the use of additional technology that could be used to establish a constructivist learning environment. The researcher left with the feeling that some constructivist learning may be present, but that it remains in its infancy.

# Chapter V

## Conclusions and Recommendations

### Introduction

This chapter begins with a discussion of the key findings presented in Chapter IV. The findings are explained and used to answer the study's research questions. These questions were (1) What is the nature of teaching in an online environment in a rural community college setting? (2) What is the nature of the interaction between instructors and students and among students in an online course? (3) How do community college instructors perceive the effects of online learning on their students? (4) What are the advantages and disadvantages involved in teaching an online course?

After discussing the findings and answering the study's research questions, recommendations for the site studied and for future research studies are provided. The limitations of the study are also addressed. Key findings are reiterated, and questions raised by the study are discussed.

### Research Question 1:

### The Nature of Teaching Online in a Rural Community College Setting

The first research question focused on the nature of teaching online in a rural community college setting, specifically in one community college system in rural region in one mid-Atlantic state. This broad question is, in part, answered by the study's other three research questions; all of the findings paint a very vivid portrait of what teaching online in a rural setting entails. In many ways, teaching online in a rural community college is comparable to teaching online in any other community or four year college in

that students and teachers experience many of the same rewards, benefits, frustrations, drawbacks, and opportunities as their counterparts in other academic institutions. Everyone faces challenges when teaching online. For example, those challenges posed by a lack of face-to-face contact and the increased amount of preparation required of the teacher to teach online are not just specific to the rural setting. The Florida State Board's study (2000), which included 153 faculty members, confirmed that many of their instructors report similar challenges. The participants in this study also experience many of the benefits of teaching online, such as flexibility and the freedom from schedule constraints posed by traditional, seated classes. The potential to teach different and additional courses and students, and the opportunity to develop professionally are also present.

Another finding unrelated to the rural setting but directly connected to the nature of online instruction is the increased time it takes to prepare, monitor, and teach online. Mr. Lightwood mentioned spending hours at the computer each day reading e-mailing, grading work, and providing extensive written feedback. The lack of face-to-face contact is compensated for by more extensive feedback, and extensive feedback takes time. Mr. Tapley, who only visits campus twice weekly, said he works for the college seven days a week. The written feedback and monitoring of discussion threads, etc. require more time. Mrs. Flemming reported spending much more time preparing for an online course, as did Mrs. Carstone. Mrs. Wickfield and Mr. Harmon said if a teacher really wants the course to be rigorous and challenging, then a great deal more preparation time is required. Mr. Nemo said he spends so much time preparing for his online courses that he has yet to

realize the flexibility benefit. In fact, he said he spent more time preparing for one online course than he did for the rest of his seated courses combined. Increased preparation on the part of the teacher is definitely a pattern, but Mr. Dawkins and Mrs. Maylie felt differently about this issue. Mrs. Maylie felt that she prepares equally for seated and online courses, and Mr. Dawkins, who has been teaching online for ten years, reported a decrease in preparation time since his class is established. Overall, though, the increased preparation time is a major issue with instructors, and it is consistent with the findings of other studies.

In relation to the theoretical framework of the study, the researcher found some evidence of constructivist learning principles in the online courses. Specifically, some of the courses observed exhibited some of the components provided in the *Technology Use Taxonomy's* (North Central Regional Educational Laboratory, 2004) criteria for measuring the presence of constructivist learning principles. Simulations were used in a few courses; online research was used in most of the courses, and interaction was a key component for seven of the nine participants' courses. Instructors also required students to connect their assignments to real-life, relevant experiences. For example, one instructor required reflection upon an economic principle and high gas prices. What other topic could be more relevant to the rural commuter than attending a college that recently revised the course schedule so that classes were taught four days a week instead of five in order to ease the financial burden that gas prices place upon their students?

Students were also required to be actively engaged in many of the classes. Discussion threads were heavily used by most participants. Some instructors utilized

simulations and models, and a few required the use of outside resource people. However, throughout the entire study, only one participant, Mrs. Carstone, ever uttered the word *constructivism.* In fact, she was the only participant to mention any type of adult learning theory. The other participants appear to practice some of the elements of constructivist learning theory, but they do so without an understanding of a theoretical base. The potential for online learning to be constructivist in nature is present, and constructivism and online learning may be effectively wed, but it is not yet fully realized in this setting. Experience, practicality, and the individual instructor's belief about what works best in the classroom are what drive instruction.

A final advantage that a few instructors mentioned, and that others indirectly implied, deals with the organizational aspect of their courses. Mrs. Flemming, Mrs. Wickfield, and Mrs. Carstone spoke of feeling the need to have the entire class organized and posted before the course started. Mrs. Maylie also said she was better organized online. Others reported that it was easier to stick to your schedule and not get distracted as some times happens in a seated course. The organization was in part driven by the need to make everything as clear as possible from the start in order to help students who may have readiness issues know exactly what to expect from the course.

. Two rural specific patterns did emerge. One dealt with dial-up problems in the rural area, and the second dealt with the feelings that many students in rural areas were less prepared to learn online than their more urban counterparts. Additional challenges specific to the rural setting do exist. The absence of a sophisticated Internet infrastructure in the rural service areas poses problems. Dial-up Internet access is the only option for

many of the students in online classes, and the problems that plague those limited to dial-up access, such as slow connection and download speeds, frustrate both students and their instructors. Many instructors feel that dial-up hampers them from using technology to the extent that they would like to use it. For example, one instructor, Mrs. Wickfield, indicated that she omits the audio-portion of her presentations in order to reduce file size so that she can accommodate her students who do not have access to high speed Internet connections, and she said almost all of her students fall into this category. Mr. Harmon and Mr. Tapley reported similar experiences. This finding will be elaborated upon later in this chapter in a discussion of drawbacks, but the issue bears mentioning under the nature of the rural setting discussion because this finding is perhaps the single most important finding unique to rural areas.

A second finding related to the rural setting is that instructors reported being frustrated by students who are under-prepared for the online classroom, both academically and technologically. Mrs. Maylie and Mrs. Wickfield cited problems with students who are under-prepared to learn online. Mr. Tapley and Mrs. Maylie felt the problems with a lack of foundation in basic writing and reading comprehension skills were an issue. Mrs. Maylie felt like students from the suburbs in other parts of the state were better prepared intellectually than those in rural areas served by her community college. Mr. Lightwood mentioned several times that online learning was not for everyone, but rather for a small segment of the community college population. Mrs. Maylie cited an example of an online student who was excelling online, but she noted that he was "already smart to begin with."

Mr. Nemo had reservations also. He believed online learning was a good thing for people who could learn by reading, but he worried about those who did not read well. Mrs. Flemming also pointed out that she believed developmental (remedial) students are ill suited for the online learning experience. Saxon and Boylan (n.d.), in their research of 18 studies on remedial community college students support these participants' concerns. Saxon and Boylan also noted that community college students often lack the self-regulating behaviors needed to learn online. The participants in this study confirmed that online students need to be motivated, disciplined, mature, responsible, and willing to become actively engaged in their learning. The participants implied that successful online learners possess a degree of self-directedness. Bandura (1997) supports the participants' views about self-directedness. He speaks of the motivational facet of self-directed learning, noting the need for "self-monitoring, self-efficacy appraisal, personal goal setting, outcome expectations, and affective self-reactions" (p. 228). Bandura also notes that when self-regulatory skills are not present, people procrastinate. The participants confirmed that those who procrastinate and are unable to meet deadlines do not fare well in the online classroom. The Illinois Online Network Board of Trustees (2005) also supports the view that students must be able to communicate through writing and that they must be self-motivated and self-disciplined. Palloff, Rena, and Pratt (1999) said that online students often have limited access to their instructors because of distance and time constraints, so the instructor is not always in control of what the students learn. Therefore, it is left to the student to make sense of the body of knowledge.

## The Importance of these Findings

The finding concerning increased preparation time, though not necessarily unique to the rural setting, is important because instructors new to online instruction need to be aware of the additional demands that teaching online places upon the instructor, and that these demands may very well offset the flexibility benefit. The lack of face-to-face contact has to be compensated for, and that compensation generally takes the form of increased written feedback, and increased written feedback is very time-consuming. Mr. Lightwood, Mr. Tapley, Mrs. Carstone, Mr. Harmon, and Mrs. Wickfield all spoke of the increased preparation time being a burden on the instructor. Mrs. Wickfield and Mr. Harmon said "if you do it right" and "if you care," it takes a great deal of time. Mr. Nemo said he spent more time preparing for, grading, and monitoring one online course than he spent on all of his seated courses combined. Mrs. Carstone spoke of how easy it was for even the most efficient instructor to get bogged down in the grading and monitoring of the course and to fall behind. All online instructors need to know upfront that teaching online does not mean less work; instead, it more than likely means more.

The dial-up issue is also important because seven of the study's nine participants said the bulk of their student population is limited to dial-up Internet access. One teacher, Mr. Lightwood, reported that he is also limited by dial-up access at home and that downloading e-mails is very time-consuming as a result. The reason this point matters is that the dial-up problem can limit the effective use of technology, including opportunities for students to interact with each other. For example, videos, complete with audio, may be used to build rapport with the students and to help students feel like there

is a real person behind the e-mail. The use of videos may have the potential to reduce feelings of isolation by allowing the student to put a face and a voice with the name, and this familiarity may result in increased interaction between the student and instructor. But, both Mr. Harmon and Mrs.Wickfield noted being unable to use audio because of dial-up, and Mr. Tapley said he also limits technology use as experiences with the frustrations caused by dial-up made the use of assets such as videos and graphics infeasible.

Two teachers did not believe the dial-up problem was an issue, but as stated earlier, these two do not use a great deal of technology by choice, so they would not have faced the problems that those who have tried, or who would like to try, videos, Powerpoints, simulations, and graphics to enhance their instruction. There will always be people who will not embrace technology, and that in itself is not always negative (Robertson, 2003), but for those who would like to use videos, graphics, photos, simulations, and other aspects of technology to enhance their instruction, dial-up access problems are at the top of the list of frustrations for those who teach in rural areas.

Moreover, if one believes that a constructivist approach to online learning is in order, as does Mrs. Carstone, the dial-up issue may frustrate the use of technology to create a constructivist learning environment. Dewey (1938) advocated principles that are found in constructivist learning, and Morrison (2003) and Frank (2005) also do. Ally (2004) also supports a constructivist approach to online learning. The opportunities for engagement, interaction, collaboration, and reflection abound in the online setting. For example, Mrs. Carstone uses the online technology to foster interaction among students,

to promote cooperative learning activities, and to provide opportunities for reflection. Mrs. Wickfield and Mr. Harmon utilize simulations, and Mr. Lightwood requires online research. Further, if one refers to the *Technology Use Taxonomy* created by the North Central Regional Educational Laboratory in 2004, in order to use technology to facilitate constructivist learning, the online course must include visualizations, simulations, problem-solving with real data sets, online research, and communication with videos and audio. Dial-up limits the extent to which many of these components are currently being used. Mr. Harmon has attempted to use introductory videos and would like to add more. Mr. Nemo would also like to include a variety of media in his online courses.

It is important to note, however, that though dial-up issues were a key frustration for rural instructors at the time this study was conducted, this problem will be solved in the immediate future, possibly as early as the fall 2006 semester. First, as Mrs. Flemming demonstrated, the *Breeze* technology offered through the Blackboard program allows the teacher to conduct live or recorded courses, complete with audio, videos, Powerpoints, and other graphics. According to Mr. John Wemmick, Blackboard Administrator for one community college, *Breeze* converts files to a flash format which uses less bandwidth, and they do not take a large amount of time to download, even on dial-up connections (personal communication, July 10, 2006). If instructors are willing to participate in *Breeze* training offered by the college and to implement the *Breeze* component into their online classes, the dial-up issue will be less of a problem. Also, technology is constantly evolving, and as Mr. Harmon pointed out, the time may come when cell phones and other devices such as i-Pods will have the capability of downloading online courses. And, for

those in rural areas, satellite Internet connections are currently available, and though installation fees were initially very expensive, current prices are half of what they were a year ago in some areas. For example, last year, one very popular satellite company offered satellite installation fees for $600. Today, a similar company is offering satellite Internet installation for $299. As with any type of technology, such as computers, televisions, palm pilots, and cell phones, prices will continue to decrease as new forms of technology become available.

The unpreparedness of students is more disturbing than the dial-up issue because no immediate solution is available. Further studies are needed on self-directedness and online learners, and the extent to which rural community college students are self-directed enough to succeed online. Grow (1991, 1996) reminds us that true self-directedness is never achieved in the institutional setting, but every participant in this study directly stated, or indirectly implied, that those students who succeed online must have some degree of self-directedness. Online learning offers many benefits, with flexibility and convenience being the key benefits to students, but if only a "small segment of the population" is suited to learn online, and as Mrs. Maylie said, the successful ones are "those who were already smart to begin with," then the online offering may be creating a grave dilemma.

For example, Cohen and Brawer (2003) discussed how community colleges provide access and promote social equality. They also talk of the "comprehensive" and "untraditional" nature of community colleges. Further, the American Association of Community Colleges (2005) said that community colleges are all inclusive and open to

anyone who wants to learn. The dilemma develops because if online courses are only suited to a certain, small part of the community college population, the "smart" ones who will learn regardless of whether they are learning online or in a seated classroom, then perhaps online courses are really widening the gap between the haves and the have-nots. If so, this widening of the gap is in direct conflict with the overall mission of the community college. Instead of promoting social equality, it may be producing more social inequality.

Researchers and instructors also need to experiment with constructivist learning theory and online learning to determine if constructivism is a good approach to online teaching and learning. Some scholars, such as Doolittle (1999) and Robertson (2003) question the assumption that constructivism is the best approach for online learning. Schutte (1997) was careful to remind us that online teaching won't solve all problems, and that online classes have their limits. Schutte also believes online learning may only work for certain subjects. Mr. Nemo expressed similar sentiments about the subject may determine how well the online medium works, and Mr. Dawkins noted that some types of classes do not lend themselves to discussion and interaction like others do. Mrs. Flemming noted that the nature of her course made it impossible to teach solely online. A study of subject specific advantages and disadvantages of online courses would be useful.

Moreover, as online teaching and learning continue to expand, and one need only connect to the Internet, glance at any college catalogue, or turn on the television, and he finds an abundance of online course and degree offerings, more attention needs to be given to theory, specifically constructivist learning theory. Palloff, Rena, and Pratt

(1999) believe online students need to construct knowledge and that by doing so, they acquire critical thinking skills. They also learn how to research, and they develop skills and confidence. Collaboration, with their teachers and with their classmates, is also important. Students are expected to be active learners. The online classroom provides access to discussion threads, and virtual groups for interaction and cooperative learning projects, links to outside resources, and an abundance of opportunities for online research. A strong case can be made for a constructivist approach to online teaching.

Mrs. Carstone talked about the opportunities for creativity that a teacher encounters when teaching online. Participants all spoke of how their role changes in an online course. They reported being facilitators and guides, as opposed to lecturers. Mrs. Carstone called herself a "shepherd." The change in roles, from lecturer to guide or facilitator, often requires a change in presentation methods. Mrs. Flemming stressed presenting materials in a variety of ways, and *Breeze* is one way that she achieves variety. Mr. Harmon talked of the evolution of his online classes throughout the past several years. As the participants have gained experience teaching online and as they have faced various problems and drawbacks, they have become creative and resourceful, and as a result, they have adapted to teaching online. Some of this adaptation has resulted in finding ways to circumvent technology issues caused by dial-up, such as using *Breeze* or using less technology in online courses, but some of the adaptation has required instructors to change the way they teach, prompting them in a more constructivist direction. For example, the heavy use of discussion threads by most participants provides many opportunities for interaction and reflection on the part of the student. The

discussion threads require students to be actively engaged in a topic. Also, online research is required by most instructors, and most instructors spoke of the online setting as requiring a role change to more of a facilitator, manager, or "shepherd," rather than a lecturer or content expert. Again, the demands of online teaching and learning may be the catalysts behind what constructivist learning principles current exist.

## Summary

Three main points emerged when researching the question of the nature of teaching online in a rural environment. The first dealt with the increased preparation time on the part of the instructor. If an instructor wants to be an effective online teacher, he must be willing to accept the additional demands that online teaching places upon him. Another of these issues dealt with limitations posed by dial-up access in rural areas. Dial-up access is the bane of the online instructor's and learner's existence. However, hope is on the horizon, and in the future, new technology and the cost of satellite Internet access will decrease, rendering this problem a thing of the past.

The third issue was more serious, and that issue dealt with the limitations of the online students themselves. Self-direction and the self-regulatory behaviors that accompany self-direction are often lacking in the online setting. Instructors are often forced to contend with those who are ill prepared for learning online, thus leading to a frustrating experience for all involved. Finally, just as there are problems, there are also benefits. Online instructors in rural settings experience the same benefits that online instructors in non-rural settings do. Like anything else in life, teaching online in a rural setting has advantages as well as disadvantages.

## Research Question 2:

## The Nature of the Interaction

The second research question focused upon the nature of the interaction in online courses. The researcher studied both the interaction that online students had with their online instructors, and the interaction that occurred among students within the online classes. The interaction proved to vary from course to course and instructor to instructor, and interaction occurred in a variety of ways. The primary pattern found in reference to this research question is that e-mail dominates as the form of interaction between students and instructors, and discussion board forums are the primary means of communication between students.

Instructors and students interact primarily through e-mail and discussion board threads, though all instructors are accessible by phone and mail, and they all provide office hours for their students. Online students are encouraged to make appointments or to visit the instructors' offices if they need help. Several of the instructors, Mrs. Maylie and Mr. Dawkins, said they know many of their students personally, an advantage provided by teaching in a small, rural setting, and that their students do visit both formally and informally. One instructor, Mrs. Carstone, holds virtual office hours where she is available for live, online chats. Mr. Tapley and Mrs. Wickfield also interact with their students through the postal mail. Still, in the end, e-mail remains the primary form of communication between faculty and students, and both Mrs. Dawkins and Mr. Tapley point out that there are students who progress through the class rapidly and who have very little contact with the instructor.

In discussing instructor and student interaction, the researcher confirmed that the amount varied. Some instructors such as Mr. Harmon and Mrs. Wickfield, required the students to interact regularly, and if student contacts lapsed, they contacted the student via e-mail to determine the cause of the lapse in communication. Other instructors, such as Mr. Lightwood and Mr. Tapley, said students e-mailed them when problems arose, but Mr. Tapley added that the expectation is that most students would never see him face-to-face. Some of the variation may be attributed to the instructor's approach to the course and his her or her beliefs as to how important the interaction component is. Another cause of variation in interaction may deal with the student's willingness to interact with the teacher and others. A more self-directed learner may proceed through some of the courses studied with minimal contact with the instructor. Mr. Tapley talked of how many of the really good, motivated students who disappeared from his night classes when online learning first began, have resurfaced in his online classes. Mr. Tapley and Mrs. Carstone also added that the student must take the initiative to make the contacts with the instructors when problems arise. Mrs. Maylie and Mr. Dawkins reported that many of their students visit them during office hours. Mrs. Maylie actually knew all of her online students from previous seated courses. The small size of the institution is more amenable for face-to-face relationships.

Seven of the nine participants also interact with their students via discussion threads. Instructors utilize discussion threads for instructional purposes and for a platform to solve technical and other problems. Several teachers post discussion forums that allow students to consult each other about technical issues, due date reminders, etc. Most of the

discussion forums, though, draw upon the required content of the class, and students are given the opportunity to reflect and share responses with each other. For example, Mrs. Maylie's students are required to read selections in classical texts such as the *Bible,* the *Koran*, and Dante's *Inferno,* reflect upon two or more works, and post their reflections. Mr. Nemo's students study content in the text, relate the content to their own experiences, such as in the gas price case, and then post their reflections for their classmates. Mrs. Carstone asks her students to consider dilemmas and to share their responses, such as in the case of Internet censorship. Mr. Harmon requires his students to respond to sensitive issues related to the dilemmas that students will encounter in his field. Teachers also post announcements on the Blackboard site; these announcements serve as reminders for due dates, schedule changes, and other important events and changes.

## Student Interaction

The amount of interaction among students varied from course to course. Eight of the nine participants recognized student interaction and opportunities for collaboration as valuable components of the online learning process. Seven of the nine participants actually incorporated student interaction into their online courses, and of the two who did not include interaction, one, Mr. Lightwood, said time constraints as far as monitoring the interaction made it infeasible, and the other, Mr. Dawkins, strongly opposed interaction because he felt students needed to master the material on their own. He viewed student interaction as having the potential to compromise the integrity of his course. Again, the instructor's beliefs concerning interaction influence the amount that occurs online.

Most of the student interaction in online courses occurs on the discussion threads provided by the Blackboard software. Teachers post threads, and students respond to each other's postings. Discussion threads are preferred to chat rooms because according to several participants, the topic is often lost or bogged down in chat rooms. Mr. Tapley said one or two people will dominate chat rooms, and it's easy for someone to spend half the time talking about their children or other issues that are not related to the course, and he added that no one else really wanted to read that type of comment. The researcher's observations confirmed that discussion threads are heavily and regularly used in seven of the nine participants' courses.

Other opportunities for interaction among students do exist. For example, Mrs. Maylie requires her online students to attend one of her seated courses and to present the findings of a project to the class. Mr. Nemo encourages his online students to visit the seated counterparts. Mrs. Carstone and Mrs. Harmon also assign projects that require students to collaborate either in person or online. Interaction may be better in a seated class, but it may not. The point is that these instructors feel that their students benefit from interaction with other students, so they provide additional opportunities for students to interact.

Some instructors also require their online students to interact with outside resource people. Mr. Tapley requires his students to write letters to the editor and to conduct interviews that are related to his course content. Mrs. Flemming's students work with each other in a professional setting. Mr. Dawkins' students interact with a technology resource person if problems with Blackboard occur.

## The Importance of these Findings

The findings concerning interaction are very significant to this study for several reasons. First, the participants in this study and the literature review, (i.e. Williams, 2003) confirm that feelings of isolation and alienation are one of the biggest drawbacks of online learning. Mrs. Carstone, a fan of online teaching, also said the teacher can experience feelings of isolation. Mr. Dawkins misses not knowing the students like he did in seated courses. Mrs. Maylie and Mrs. Flemming both felt that their students needed face-to-face contact the most. Mrs. Carstone said, interaction is "the best way to mimic the seated classroom." Because the literature, the participants in the study, and the student surveys found on the college's homepage, all viewed isolation as a problem, common sense dictates that the more student-teacher interaction and the more interaction among students within an online course, the greater the opportunity to reduce feelings of alienation and isolation. In this respect, interaction is a way to reduce the problem of isolation. Regular contact with the instructors and regular participation in discussion threads, as well as collaboration on projects and assignments, will help alleviate the problem. Wilson and Lowry (2000) also believe interaction is vital to creating a learner-centered environment. However, online interaction may not be the panacea for isolation; a certain degree of isolation may be a part of the online package.

Interaction via discussion threads also provides the students time to reflect on course content and to reflect on the ideas of others, enabling them to construct meaning from what they are learning. Palloff, Rena, and Pratt (1999) do not see student interaction as an option; instead interaction is a requirement in the development of critical

thinking skills and in the construction of knowledge. In this sense, interaction is a learning tool. The constructivist approach to online teaching, advocated by this researcher, is facilitated by an interaction component. The online courses with more interaction, such as Mrs. Carstone's, Mr. Harmon's, and Mr. Tapley's courses, were constructivist in nature. Mr. Dawkins' course, which had no student interaction, was the least constructivist course studied. On the other hand, Mr. Lightwood's course also lacked the student interaction component, but the course was still constructivist in nature. For example, Mr. Lightwood utilizes models, online research, opportunities for reflection, and opportunities to relate material read in class to real-life studies. Thus, the researcher concluded that while a course may be somewhat constructivist without the student interaction component, the opportunities to interact and reflect provided by discussion threads add another facet to the constructivist environment.

## Summary

The amount of interaction varies from course to course and instructor to instructor, and the majority of the study's participants believe that interaction is an asset to learning. Student-teacher interaction takes a variety of forms, with e-mail being the primary venue for student-teacher interaction. Students interact with each other primarily through discussion board threads posted by the instructor. Some instructors provide additional opportunities for students to interact in groups, and some online students are required to interact with outside resource people. Again, the interaction varies, depending on the type of the course and on the beliefs of the individual instructor.

The interaction component of online courses serves dual purposes. The first implication is that interaction is used as remedy for the isolation/alienation problem. This use is more practical in nature. Students will feel less isolated if they communicate more with their instructors and other classmates. Mr. Tapley, Mr. Harmon, and Mrs. Carstone all spoke of building rapport through online interaction. Students are also able to help each other with technical difficulties and to remind each other of due dates. The second implication is a learning one. Many instructors miss the face-to-face contact and believe that students learn from interacting with each other, so they build in and require students to interact with each other. All instructors who use discussion threads count the student participation in them in the final grade. Further, the classes with a great deal of interaction tend to be more constructivist in nature, though Mr. Lightwood contradicts the idea that a class can't be constructivist unless it includes student interaction.

## Research Question 3

### The Instructors' Perceptions of the Effects of Online Teaching and Learning on their Students

The participants' views of the effects of online learning on their students also varied a great deal. All participants identified assets and drawbacks of online teaching and learning. It is important to note, however, that not a single participant in this study felt the online classroom was superior to the traditional, seated course. Several participants believed the content could be as rich and as rigorous, but all of the participants placed a great deal of emphasis on the importance of face-to-face contact. Still, the participants identified many practical and learning benefits of online learning.

Instructors viewed the practical benefits of online learning as the flexibility and convenience afforded to non-traditional students who have rotating work schedules, child care demands, transportation problems, and numerous other demands that would prevent them from attending school during traditional school hours. Mr. Harmon noted that none of his students would be able to take classes if they could not do them online because their jobs require them to work rotating shifts. Thus, the access provided to non-traditional students is a major benefit. This finding was no surprise, as it is cited repeatedly in the literature by Cohen and Brawer (2003) and others. Newman and Scurry (2001) speak of easy access to large amounts of previously unavailable material.

Instructors were quick to identify the learning benefits for online students. Mrs. Carstone talked about how an online course can be very liberating for a student in that students are given the opportunity to reflect on their learning, to set their own paces, and to draw on their personal experiences. She also noted that online courses force students to use computers productively. Many students also become better thinkers, readers, and writers. Mrs. Wickfield said online courses force her students to become better problem solvers. She said when they encounter problems online, most students will attempt to resolve the problems before they contact her and ask for assistance.

Other benefits include additional opportunities for reflection and interaction. Discussion board threads, when structured by the online teacher, can prove to be a very fertile learning ground. Mr. Tapley spoke of shy students who have their opportunities to speak on the discussion threads. Student may reflect on what their classmates, their teacher, or they said and later revisit the threads and elaborate upon their reflections.

Mrs. Carstone reported spending so much time developing really good discussion threads, that she incorporated those threads into her seated courses as well.

Most participants believed the content online can be just as rigorous and just as rich as the content of a seated class. Instructors also note giving more detailed, written directions and examples in order to compensate for not seeing the students face-to-face. Mr. Lightwood and Mr. Tapley spoke of the great deal of time they spend on providing written feedback on student papers. Extensive feedback helps compensate for the absence of a teacher in the room. Also, the *External Links* feature on Blackboard provides a gateway to a world of outside resources and information.

The instructors were also very clear about the negative effects of online learning on their students. Feelings of isolation, a lack of academic preparedness on the part of the student, and dial-up Internet access issues were frequently cited. Mr. Nemo had many concerns about the negative effects of online learning on his students, while Mr. Dawkins held opposite views than Mr. Nemo, both on the negative effects and the integrity issue. Throughout the course of the study, one message that became very clear was whether or not online learning is good for a student depends very much on the student and if the student is suited to learning online. Mrs. Carstone, as stated earlier, summed it up well, when she noted that whether a not a student benefits from her online class may not have anything to do with what she does, rather it may all depend on if that student is suited to learn online. Mr. Harmon added that the instructor shares the responsibility of creating a successful online learning experience, and Mrs. Maylie noted that she was better-suited to

the traditional classroom and felt that she taught better in person than online. Both the online instructor and the online student must share the burden.

## The Importance of these Findings

The practical benefits of the online classroom matter for many reasons. If one recalls, community colleges frequently serve very different populations than traditional, four-year universities, and the benefits of flexibility, convenience, and access provide the non-traditional adult learner the opportunity to complete courses, pursue degrees, or seek career training. In this sense, the community college provides access to a group of people that otherwise would have no access. The American Association of Community Colleges (2005) says that community colleges are "inclusive institutions that welcome all who desire to learn" (n.p.). The online medium is conducive to the continuance of this inclusive tradition.

The learning benefits of online learning are also very important. Online instructors talked of how the online setting forced to students to learn to read, write, and think critically. Problem-solving and technology skills are improved. Even the teachers who complained of under-prepared students agreed that if the student stayed in the online course, he or she would leave a better thinker, writer, and problem-solver. This finding is important because it implies that even an ill-prepared student may learn the traits and skills needed to succeed in other classes and in life. And, the opportunities to share and reflect via the discussion board allow students to learn from each other's experiences, thus making the course content more relevant. And, if the content online can be as

rigorous, if not even more rigorous than a seated course, this may also work in favor of the student by making him better prepared for whatever lies ahead.

The findings concerning the detriments have been discussed in other sections, but isolation on the part of the students is the primary drawback to online learning. However, as serious as this problem may be, the online instructor can solve it, or at least mitigate it, by building in opportunities for students to interact with each other and by continuing to be accessible to the student in a variety of ways. If one considers all of the learning benefits of online learning identified by the participants in this study, and if one is willing to work to promote teacher-student and student-student interaction, then this detrimental effects of this primary drawback may be greatly reduced.

Another drawback deals with the integrity issue. Daughty and Funke (1998) noted that faculty had concerns with integrity issues in distance education programs. Several participants in this study expressed their feelings about integrity, but it was not expressed frequently enough for it to be considered a pattern or a theme. In fact, one participant, Mr. Dawkins, vehemently defended the integrity of the online course, and he believes that the people who have problems with this issue are the people who do not teach online and who feel threatened by online teaching and learning. Mrs. Wickfield spoke about integrity, but she concluded that students could cheat in any class, and she did not feel as strongly about the issue as Mr. Dawkins did. In fact, if the researcher had not specifically mentioned integrity, this issue may not have arisen at all. Mr. Nemo, on the other hand, discussed his concerns with integrity and cheating in online classes at great length in both interviews. In fact, he was so upset by the incidences of cheating, that he wants to require

students to attend on-campus classes a few time during the semester in hopes of alleviating the problem. It is difficult to determine if this problem is pervasive because the topic was only mentioned by 1/3 of the study's participants, and the feelings about it went from one extreme to the other. Other online instructors in other setting have cited integrity concerns (Daughty and Funke, 1998).

Finally, the dial-up access problem which was emphasized by seven of the study's nine participants is merely a temporary frustration, and as discussed in the first research question, this issue will soon cease to be a problem.

## Summary

The participants in this study provided very candid views about the effects of online teaching and learning on their students. Everyone provided examples of benefits and drawbacks for their students, and of the nine participants and the two pilot participants, only one, Mrs. Maylie, said she did not plan to teach a totally online class again, but she did note that she would teach a hybrid course. Also, for every problem or drawback; however, there is a potential solution—for example, feelings of isolation may be countered by providing additional opportunities for interaction, and dial-up issues may be circumvented by the use of *Breeze* technology until the inevitable evolution of technology renders dial-up a thing of the past.

Patterns in the data demonstrated that instructors perceive the benefits that online students realize as flexibility, increased access, opportunities to reflect, the potential for increased rigor, the potential to become better thinkers, readers, and writers and to become problems-solvers are key positive effects of online learning on their students.

Technical problems resulting from dial-up Internet connections are a problem, but those problems are rapidly fading and will soon be merely an unpleasant memory. One negative aspect of online learning on students is that some teachers found many of the students in online courses are ill-suited to learn online. This problem creates dilemmas for the students, the teachers, and the institution. The possibility exists that those who stand to benefit the most from online course offerings, those who most need the access, may also be some of those who are not well-suited to learning online.

Finally, concerns with integrity were present, but the views conflicted to the point that one cannot cite integrity concerns as a pattern. Three of the nine participants mentioned integrity, and their feelings ranged from not an issue, to perhaps and issue, to definitely an issue. These views are irreconcilable.

## Research Question 4:

### The Advantages and Disadvantages Involved in Teaching an Online Course

The participants in the study cited many advantages and disadvantages to teaching an online course. Advantages included schedule flexibility for the teacher, opportunities for creativity on the part of the teacher, opportunities for professional development, opportunities to teach additional courses and to reach more students, a lack of space requirements in order to hold class meetings, and a feeling of being better organized in the online course. Disadvantages cited by the instructors included the increased preparation time required to effectively teach online, isolation caused by a lack of face-to-face contact, technical problems, a drain on the enrollment in seated classes, issues related to dial-up Internet access, and under-prepared students in online courses.

The flexibility advantage was cited by several participants, including Mr. Tapley, Mrs. Flemming, and Mrs. Carstone. Mr. Tapley said that was the most important benefit for him personally, and that the flexibility of when and where he taught enabled him to continue to teach in a rural setting. Mrs. Carstone talked of having the same flexibility that the students had as to when and where she does the work, and Mrs. Flemming liked being able to post documents from home because it freed her to pursue other tasks at work. But, Mrs. Wickfield said that the increased preparation time to teach online cancelled out any flexibility benefits. Mrs. Flemming also reported a great increase in preparation time, as did Mr. Harmon, Mr. Lightwood, and Mr. Nemo. Feelings about preparation will be addressed in subsequent paragraphs.

Mr. Tapley, Mr. Lightwood, Mrs. Maylie, and Mrs. Wickfield said that another benefit of online courses is that they are not subject to the rigid minimum student enrollment requirement that seated courses are. For example, Mrs. Maylie was able to teach an elective course to a very small number of students. If this course were a seated one, she would have had to drop it because the enrollment numbers were not met. Mr. Tapley spoke of students receiving credits for two courses through one Blackboard site, and Mr. Lightwood said the administration allows online instructors to collapse courses and numbers in order to meet overall requirements. Mr. Nemo summed it up well when he said online teaching allows the teacher to teach more, more students and additional courses.

Another disadvantage mentioned by Mrs. Maylie and Mr. Nemo is that online offerings may draw from the seated population. Mullins (as cited in Finkel, 2005)

reported the community college faculty reported feeling threatened because online enrollment may pull from enrollment in traditional courses. In one conversation, Mrs. Maylie did say she was doing this "in self-defense" because "everything was going online," and online courses were pulling students from her seated classes. And, Mr. Nemo gave an example of a course that had not been offered in a seated class for over a year because the online courses were causing the seated courses not to make.

Another advantage, a practical one, is that if the class is taught online, the student completes the work from somewhere else, and the college does not have to provide space for the class. This point concerns a broader economic force in the rural community that has generated the push for online learning. As stated in the literature review, the absence of a physical room saves space and money. The additional space may be used for additional course offerings for seated courses. McGovern (1999) said that a virtual university would cost less to operate than a single classroom on a college campus. In times of budget cuts and in a setting that is amenable to what is practical, this advantage may prove to be very important.

The researcher could not discern exactly what was driving the move to go online, but the feeling that instructors were expected to do so was present. One participant said, "I can see where this is going, and I am not going to fight technology." Mr. Nemo said he was told when he was hired that he was expected to teach online, and Mrs. Maylie felt pressured to go online also. However, this unintended, yet unfair, consequence harms faculty and students who prefer seated classrooms.

Other disadvantages were dealing with dial-up problems dealing with under-prepared students, and concerns with integrity issues. These concerns have been addressed in the previous section.

## The Importance of these Findings

The findings are important because they bring to light facets of online teaching that future online teachers should consider. Teaching online takes a great deal of preparation time, and the teacher must be willing to change from a lecturer role to a facilitator role. All of these demands are connected to the pressure to teach online. Instructors also must organize their courses, provide more written feedback, more detailed written directions, and more opportunities for students to interact. In short, the drawbacks of online learning, such as a lack of face-to-face contact and the presence of under-prepared students in online courses, mean that the teacher must prepare more and differently in order to compensate for the needs of their online students. It may be tempting to buy into the online teaching package because of the appeal of teaching from home or en-route to some exotic destination; however, the online teacher must understand that the flexibility aspect may be hampered by the increased preparation time required.

Online teaching also forces instructors to become technology problem-solvers. They must deal with technology issues when they arise. For example, instructors need to ensure that the student limited by dial-up access still benefits from additional technology that may be used to enhance instruction. Instructors also have to find ways to deal with under-prepared students. In the ideal classroom, everyone is suited to learning, but in the

real world, this is not always the case, and online learning places additional demands on the students and instructors.

Instructors also have to realize that their role as an online instructor is different than their role in a traditional, seated classroom, and as a result, they may find it necessary to vary their instructional techniques. Online teaching is different, and the online instructor has to work differently, and often harder, to ensure that his students, all of whom are not self-directed, learn online.

## Summary

Teaching online is like learning online in that it has benefits and detriments. The biggest drawback for the instructor is the increased preparation time. This drawback often puts a damper on the advantage of flexibility. The instructor may choose to teach online partially to have flexibility of scheduling, and then he or she may discover that he spends more time on feedback and problem-solving than he does for a seated class. If flexibility both for students and teachers is what is driving the online teaching and learning pursuit, then the increased time required to teach and learn online may be a serious factor.

The online instructor must also realize that with the advantages like opportunities for creativity and professional developmental come disadvantages, like a loss of enrollment in some seated classes, integrity concerns, and dial-up issues faced by rural students. Instructors may also experience feelings of isolation similar to those of the online student, and they must be willing to incorporate interaction in order to reduce the isolated feelings.

Finally, online teaching has its assets and its detriments. The instructor needs to be cognizant of what online teaching entails, especially of the amount and the nature of the preparation that will be required in order to teach effectively online. Additional and different demands are placed upon the online instructor, and the instructor must be willingly to accept the additional demands.

## Recommendations for the Community College

No research study would be possible without the consent of those being studied. The participants and the participating institution should also receive some benefit from participating in the study. Because monetary compensation is not affordable or ethical in this case, the best alternative is for the researcher to provide recommendations based on her findings in hopes that the recommendations will aid online instructors and the administration in the online journey. These recommendations are based on findings in the literature, the participants' comments and concerns, and the researcher's intuition.

In-service training for online instructors is critical if online learning is going to be successful. Online instructors should be required to demonstrate their capabilities to design and manage an online course. This training should include technological issues that often arise in online instruction, as well as curriculum specialists who know how to integrate technology into the course. Training should also address the facilitator role of the online instructor. Novice online instructors in particular may need this emphasis on the role change. The additional time involved in preparing, monitoring, and providing additional feedback in the online class should be clarified upfront. The interaction component should also be addressed. Interaction among students in an online class and

between the student and the instructor helps offset the isolation problem, and interaction includes learning benefits, such as opportunities to reflect. Since isolation is the biggest drawback of teaching and taking an online course, the value of interaction should be stressed, as should the learning benefits of student interaction. As Mrs. Carstone said, interaction is "the best way to mimic the seated classroom."

Online instructors should also consider implementing *Breeze* technology to help remedy the dial-up issues. *Breeze* is a viable alternative until the evolution of technology naturally eliminates the slow connectivity and download issues. Professionals in technology trouble-shooting should provide training on how to use *Breeze* effectively and how to combat other problems such as those created by dial-up access limitations. For example, if students are unable to download large files, the instructor may consider saving files to CD-ROMs and mailing them to students.

The administration should review online course offerings and ensure that seated counterparts are offered regularly. Mr. Nemo mentioned this problem. This recommendation is important because some students do not want to learn online and some are not suited to learn online, and some teachers do not want to and are not suited to teach online, but if the class is only offered online, then the student has no choice, nor does the teacher. Frustration for the online student and instructor may result. As Mr. Lightwood mentioned, online courses may be best for a "small segment" of the population. In the rush to keep up with the technology and to go online, a balance needs to be struck so that those who are self-directed enough to do well online have that option,

but those who are not still have the seated classroom option. We do not want to do a disservice to the student who prefers and needs the traditional, seated course.

Hybrid courses may be a solution to some of the problems that plague online courses. Hybrid courses work well for Mrs. Flemming, and Mrs. Maylie noted that though she would not teach another class that was solely online, she would teach a hybrid course. Requiring students to meet face-to-face periodically, may resolve many of the problems such as feelings of isolation. It would also provide additional opportunities for interaction and rapport development.

Finally, the administration may want to examine remedial course passing scores and consider raising the bar if they are found to be too low. Many participants complained about lack of preparedness on the part of the students, and one participant mentioned that the remedial passing score may be too low. Basic skills in reading and writing, and especially reading comprehension, help determine whether or not a student succeeds online. Reading comprehension measures should be rigorous. Prerequisites for taking online courses may also be needed, and the students' advisors may need to play a role in determining whether or not a student is allowed to enter an online course.

## Recommendations for Future Studies

The researcher learned a great deal throughout the course of this study. The data collected answered the research study's broad research questions as well as additional questions that emerged throughout the process. But, there are always time constraints to contend with, the participants' and the researcher's. Hence, it is not possible to pursue every interesting and relevant idea that occurs in the research process. The data,

especially that found in the interview transcripts, are rich in detail. The recommendations for future studies are based upon ideas and findings in this study.

Several instructors mentioned that the drop-out rates in online courses were sometimes high. Mrs. Maylie mentioned an online class that began with ten students and ended with three. Mr. Lightwood said the attrition rate is higher in the introductory courses in his subject than it is in the higher level courses. Mrs. Maylie also noted that people who have problems with technology drop out of the class within the first few weeks. Carey (2001) also noted that current studies did not address student drop-out rates. A relevant and interesting study would involve investigating the drop-out rates in online courses. If they are found to be higher, the causes should be examined. The researcher's gut feeling is that the lack of preparedness issue cited by the participants in this study may be related to dropout rates.

Another good research study would involve investigating the integrity issue. Complaints about integrity were found in the literature (Daughty and Funke, 1998), and this researcher found conflicting perceptions among the participants in this study. Six of the nine participants did not mention integrity at all; one said it may be a problem; one said it definitely was not a problem, and another said it was a horrible problem.

In addition, one participant hinted that there was a push from the administration for instructors to teach online. Mr. Harmon mentioned a feeling of being "rushed." Mrs. Maylie said she agreed to teach online partially "in self-defense" because the online courses were pulling students from her seated courses, and Mr. Dawkins said he was not going to fight the online teaching because he could "see where it was headed." These

comments combined with the fact that not a single participant felt online instruction was better than the traditional, seated classroom instruction because of the lack of face-to-face contact would make an investigation of the presence of technopositivist ideology (Robertson, 2003) interesting. Robertson said of technology, when something is repeated often enough for enough people, "yesterday's propaganda becomes today's common knowledge" (p.2). A researcher may want to determine whether online learning is the best option for non-traditional adult learners in particular, or if a technopositivist ideology is driving the rush to put courses online. For example, someone should study why colleges are putting so many classes online.

Another recommendation for future research is to investigate the student readiness issue through a self-directed learning lens. The participants all indicated that learners needed some degree of self-direction in order to succeed online. The future researcher may investigate non-traditional students for self-directedness. The researcher addressed self-directedness in this study, but self-directness of online learners is an entire research study in itself. It was not the primary focus of this particular study. Further research is needed to determine if the typical non-traditional student is self-directed enough to succeed in an online setting.

Another recommendation for a future study is to look at subject specific issues in online courses. The researcher did not identify instructors by the subjects they taught because doing so would reveal their identities. Some subjects only had one instructor. A few participants, such as Mr. Nemo and Mr. Dawkins, mentioned that some subjects worked well online, and others did not. It would be interesting to investigate whether or

not online courses can be effectively utilized for all courses, or if they are better for some and not for others, and why this may be the case.

Finally, another way to improve this particular study would be to expand it to include student participants from the online courses. What do the students say about online learning? For example, Carstone's point that many students expect an online course to be less demanding than a seated course, when in reality, the online course can be more demanding for the student would be an interesting study to pursue. One may wish to look at student perceptions and expectations of online courses and the causes of these perceptions.

## Limitations of the Study

The first limitation deals with the limited number of participants in the study. The researcher does not feel like this limitation hampered her study, but she addresses it in case others question the fact that there are only nine participants. In the ideal study, all of the online instructors at the institution would have participated. However, all instructors were not willing to participate, and even if they were, the time-constraints would have prevented all of the instructors from being interviewed. For example, in one summer session, 64 online courses were taught. The researcher dealt with this limitation by interviewing each of the nine instructors twice, and by interviewing instructors with a wide range of teaching experience online and in the classroom. Instructors also reviewed all of their transcripts for accuracy, and follow up e-mails and phone calls were used if any information needed clarification. These participants were from a variety of subject areas also, and they came from two campuses. Patton (2002) also supports that in

qualitative research there is no rule for sample size. And, Merriam (1998) reminds us that the purpose is to obtain "thick rich descriptions" of the phenomenon being studied. The researcher believes the richness of the data and the cross-section of participants studied compensate for the lack of numbers.

Another possible limitation deals with bias. The potential for a researcher's bias to enter the process is always present. This researcher entered the study with some background in community colleges, having taught adjunct courses for the site that was studied, with ideas and feelings about online instruction, and with a positive attitude about Blackboard software. The researcher also favored a constructivist approach to online instruction. But, throughout the process, the researcher disciplined her bias. Data triangulation proved useful in disciplining the bias. The researcher also conducted follow-up interviews, and these second interviews, as well as e-mail follow-ups, were used to clarify anything that could have been misinterpreted by the researcher. Finally, all participants were given the opportunity to review and modify the section on their online teaching experiences. In those instances where the researcher may have made a mistake, the participant was able to correct and clarify. The researcher leaves the study with the feeling that though she likes Blackboard, it is labor intensive, especially for dial-up users, and online course on websites can be just as effective. The researcher still feels constructivism may be the best approach to teaching online, but she realizes that further studies are needed because of the conflict within the literature on this topic.

Another limitation that needs to be addressed is the lack of generalizability of the findings. First, the purpose of this research was never to generalize the results. This study

is a case study of one institution and nine participants. Some of the results coincide with findings in other studies, and some do not. The researcher's goal was to answer four research questions that focused upon one rural community college, and those questions were answered throughout the course of the study. A goldmine of data was obtained, not only from the interviews, but also from the documentation reviews and classroom observations.

A final limitation developed in the latter stages of the research process. When the researcher provided sections of Chapter IV to the participants for them to review, participants were given the opportunity to delete or change the content if they felt their identities were threatened or if they did not want certain information included. The researcher added this step to ensure that what she had written was an accurate description of who the participants really were. In at least one case, a participant deleted several facts and quotations that were important to the findings, specifically to the study's first research question about the nature of teaching in a rural community college. For example, this participant asked the researcher to delete a quotation in which he had initially said that students from the rural areas were not as prepared to learn online as students from urban areas who were enrolled in his classes. It was at this point that the researcher realized that there is a very fine line between protecting a person's identity in such a small setting and in presenting those specific details and quotations that form the heart of qualitative research. The researcher has done her utmost to provide the "thick, rich descriptions" (Merriam, 1998) that are the crux of qualitative research; however, in a few

cases, the identity concern prohibited the use of specific examples that could have aided the researcher in clarifying and elaborating upon some of the findings.

## Conclusion

This study produced several key findings. One finding is that most students in rural areas are limited to dial-up Internet access. This finding is key because it may be the only one specific to the rural area. Dial-up problems not only cause frustrations for teachers and students, but in some cases, instructors feel limited in their use of technology because of slow connection speeds and long download times. On a positive note, this problem is a temporary one. Instructors, administrators, and the technology revolution itself are already finding ways to circumvent and eliminate this problem.

Another finding is that students need to be self-directed in order to succeed online. Participant after participant described the successful online learner as one who is mature, disciplined, responsible, and motivated. Participants spoke of the need for online students to be in charge of their own learning and the need for them to possess time-management and basic reading comprehension and technology skills. The second part of this finding is that many students who are currently taking online classes have problems because they lack some of these requisites, such as time-management skills and self-directedness.

A third finding is that preparing, maintaining, and teaching an online course is a great deal of work, often requiring more time on the part of the teacher than a regular seated course. The flexibility benefit afforded to the instructor is often offset by the increased amount of preparation required. The instructor's role also changes in an online

course. Many instructors find themselves moving from a lecturer role to a mediator, facilitator, and guide role. Online instructors have to aid students in solving technical problems such as when the software malfunctions and shuts down in the middle of a student's online quiz. Instructors also have to possess the foresight to anticipate problems that may occur and offer solutions, whereas in a seated class, the problem could be addressed with everyone at the time that it occurs.

Interaction in online courses, which occurs primarily through e-mail and discussion board forums, varies as to the amount and quality, and whether or not interaction is a component of an online course is determined by the instructor's own beliefs and approach to teaching. Also, interaction serves both practical and learning purposes. In a practical sense, interaction with the instructor and among students may be used to reduce feelings of isolation and alienation. In a learning sense, students use interaction opportunities to learn from each other and to acquire content for additional reflection opportunities. Interaction is useful in promoting a constructivist learning environment.

Finally, with one exception, experience rather than theory, appears to drive the type of learning that occurs in the online classroom. However, principles of constructivist learning are present in most of the online classes studied, and the online medium can be used to facilitate constructivist learning. Still, a large gap exists between theory and practice.

## Questions Raised by this Study

The study also raised several important questions. One important question raised by this study is how well suited are community college students to learning online? If access is the key, especially in a rural setting where students may live a great distance from the campus, and if the purpose of the community college really is to educate anyone who wants to be educated and to help close the gaps spawned by social inequality, then should not the people who need the access the most, the non-traditional adult learners, be suited to learning online? Is online learning really the best option for these learners? Or, are practical benefits of access and flexibility really overriding the negative effects on online learning?

Another related question is can self-directedness be promoted and taught through the online medium? The study established that students need to be self-directed in order to succeed online. It also established that many of the online learners are not innately self-directed, thus the conflict arises.

Another interesting question raised by this study is why are colleges in such a hurry to go online? Technopositivist ideology may very well be the driving force behind the onslaught of online offerings, not just in this particular setting, but in all colleges. Do the learning benefits outweigh the various drawbacks, or is online learning just another educational fad that everyone is buying into because it is popular today? That which is popular does not always prove to be best.

A final intriguing question deals with constructivist learning theory. Is constructivism the best or even a viable approach to online teaching and learning? And, if

it is determined that constructivism is an apt fit for online teaching and learning, then how does one convince online instructors to adopt the approach? How does one bridge the very wide gap between theory and practice?

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# Appendix A

## Initial Interview Questions

1. Please describe your philosophy and practices as an educator.

2. Please elaborate on your beliefs about how students learn best.

3. Please describe how you build rapport with your online students.

4. Please describe how you determine student readiness for online instruction.

5. Briefly describe your online course(s). Please describe your and your students' use of technology in the course(s).

6. Please describe the nature of interaction between you and your students in the online environment and give an example.

7. Please describe the nature of interaction between your students in the online environment and give an example.

8. How do you feel about the effects of online learning on your students? Please explain why you feel this way.

9. What do you view as the main benefits of online learning? Explain your answer.

10. What do you view as the main detriments of online learning? Explain your answer.

11. Compare your preparation for an online course with your preparation for a traditional course.

12. What is the role of the teacher in your online course?

13. What is the role of the student in your online course?

# Appendix B

## Observation Protocol

1. What is the role of the teacher? Is he/she a facilitator or lecturer?
2. What are the students asked to do?
3. How much interaction is occurring?
4. What is the interaction like?
5. What are the sources of knowledge?
6. What are the students asked to do with the knowledge?
7. How are students involved in instruction?
8. How active are students?

# Appendix C

## Follow-Up Interview Questions

### Round 2

### All Participants

1. Several instructors mentioned that many of his/her students do not have access to DSL/Broadband technology in the rural areas in which they live. Please describe any experience that you have had with this issue and how it has influenced your use of technology.
2. In our first interview, we discussed benefits of online learning for your students. Please describe the benefits to you in teaching an online course. Also, in addition to the practical benefits for your students, what are the learning benefits?
3. Do your students utilize video-conferencing and/or threaded discussions? Why or why not?
4. Please describe any graphics, desktop publishing, videos, or presentations packets that your students use.
5. Do your assignments/projects allow your students time for reflection? Please give an example.
6. Please describe any contact/collaboration that your students have with outside resource people and with each other.
7. Please describe any simulations or models that you use in your online courses.
8. Please describe any online research that your students are required to conduct.

9. Compare and contrast the quality of instruction in a seated v. an online course? Is the content richer online?
10. Are you doing things in your online course that you did not do in the seated course? If so, what are they and why?
11. Please give an example of how you hold your students accountable in an online setting.

Individual Follow-up Questions for Round 2

1. Mrs. Carstone

In our first conversation, you mentioned constructivist learning theory, and you require your students to read articles on constructivist learning theory. Do you use constructivist learning principles in your classroom? Why? Please give an example.

2. Mrs. Flemming

In our first conversation, you said several times that developmental students should not take online courses. Please describe the problems faced by developmental students.

3. Mr. Jack Dawkins

In our last conversation, you said you spent most of your time dealing with the technical issues in an online course. Please elaborate on what types of issues you deal with.

4. Mrs. Maylie

In our last conversation, you said that your next goal is to learn Breeze. What is Breeze, and why do you feel this is important to your online course? How do you plan to use it in your course?

In our last conversation, you said, "I think our community college students need face-to-face, but I don't think you can generalize across all community colleges." What did you mean? How are your community college students different?

5. Mr. John Harmon

In our previous conversation, you said that it take a different type of learner to succeed online. How are online learners different?

6. Mr. Mark Tapley

In our last conversation, you said that your students are weak in basic technology skills. Please give examples and describe how you deal with these issues.

# Appendix D

NUD*IST 6 Coding Matrix

Matrix Node: (N 2) //Node Searches/<<Node Search 1>>
Operator: INTERSECT
Description: Search for (MATRIX INTERSECT (F) (F)). No restriction. 196 cells, 114 refer to text.
Rows: (F) //Free Nodes
Columns: (F) //Free Nodes
Data: Number of documents coded

| Free Nodes | Philosophy | application~ | actively en~ | Interaction | Student Rea~ | Technology | constructiv~ | Course spec~ | detriments | benefits | teacher pre~ | teacher's r~ | student's r~ | self-direct~ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Philosophy | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | |
| application~ | 0 | 6 | 3 | 2 | 0 | 2 | 3 | 0 | 0 | 0 | 0 | 1 | 1 | |
| actively en~ | 0 | 3 | 7 | 2 | 0 | 1 | 2 | 0 | 0 | 0 | 0 | 1 | 2 | 1 |
| Interaction | 0 | 2 | 2 | 15 | 1 | 8 | 5 | 0 | 0 | 2 | 0 | 3 | 3 | 2 |
| Student Rea~ | 0 | 0 | 0 | 1 | 15 | 5 | 0 | 1 | 2 | 0 | 0 | 1 | 1 | 0 |
| Technology | 0 | 2 | 1 | 8 | 5 | 18 | 7 | 1 | 10 | 6 | 5 | 2 | 2 | 1 |
| constructiv~ | 0 | 3 | 2 | 5 | 0 | 7 | 9 | 0 | 0 | 3 | 0 | 2 | 1 | 0 |
| Course spec~ | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |
| detriments | 0 | 0 | 0 | 0 | 2 | 10 | 0 | 0 | 18 | 3 | 4 | 2 | 1 | 1 |
| benefits | 0 | 0 | 0 | 2 | 0 | 6 | 3 | 0 | 3 | 18 | 1 | 2 | 1 | 4 |
| teacher pre~ | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 0 | 4 | 1 | 16 | 1 | 0 | 0 |
| teacher's r~ | 1 | 0 | 1 | 3 | 1 | 2 | 2 | 0 | 2 | 2 | 1 | 14 | 3 | 0 |
| student's r~ | 1 | 1 | 2 | 3 | 1 | 2 | 1 | 0 | 1 | 1 | 0 | 3 | 12 | 5 |
| self-direct~ | 1 | 1 | 1 | 2 | 0 | 1 | 0 | 0 | 1 | 4 | 0 | 0 | 5 | 10 |

# Biographical Sketch

# Biographical Sketch

Joyce F. Hurt was born in Farmville, Virginia on July 5, 1967. She grew up in Nottoway County, graduating from Nottoway High School in 1985. She received her B.A. and M.A. in English at Longwood University. She is in her 18th year of teaching high school English. She is currently employed at The Governor's School of Southside Virginia where she teaches dual enrollment English and Research Applications courses. She and her husband, Wallace B. Hurt, reside in Blackstone, Virginia.